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18 AUGUST 1986

## Worldwide Report

# EPIDEMIOLOGY

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# WORLDWIDE REPORT

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## CONTENTS

HUMAN DISEASES

AUSTRALIA

Government Backs Anti-Malaria Vaccine Efforts
(Bill Birnbauer; Melbourne THE AGE, 24 Jun 86)............ 1

CANADA

Issue of Immigrants With Active Tuberculosis Discussed
(Victor Malarek; Toronto THE GLOBE AND MAIL, 16 Jul 86)... 2

Cleanup of Cape Breton Cancer-Linked Pond Planned
(Ottawa THE CITIZEN, 21 Jul 86)........................... 3

Ontario Reports Worst Rabies Outbreak in Province History
(Marianne Steeves; Toronto THE TORONTO STAR, 2 Jul 86).... 4

AIDS Risk, Vancouver Prostitutes Test Results Discussed
(Toronto THE GLOBE AND MAIL, 8 Jul 86; Vancouver
THE SUN, 19 Jun 86)....................................... 5

Physician on Risk 5
Vancouver Prostitute Testing 5

AIDS Incidence, Countermeasures Discussed
(Various sources, various dates).......................... 6

614 Cases Reported, by Andy Ogle 6
British Columbia Incidence, by Anne Mullens 7
Warrant for Prostitute 8
Winnipeg Hospital Policy 8

Suspect Cans of Coke Classic Reported in Ontario
(Windsor THE WINDSOR STAR, 11 Jul 86)..................... 9

Ontario Doctors Call Off Strike Against Extra-Billing Ban
(Toronto THE GLOBE AND MAIL, 5 Jul 86).................... 11

'Acute Shortage' of Nurses Reported in British Columbia
(Ann Mullens; Vancouver THE SUN, 3 Jul 86)................ 12

Tree Planters' Symptoms of Herbicide Poisoning Reported
(Christie McLaren; Toronto THE GLOBE AND MAIL, 8 Jul 86).. 13

Briefs
Lake Closed to Group Baptism 15
1985 Chlamydia Incidence 15

GRENADA

Briefs
AIDS Task Force 16

GUYANA

Plans Under Way To Improve Regional Health Services
(Georgetown GUYANA CHRONICLE, 5 Jun 86).................. 17

Riverain-Area Benefits 17
Training Workshops 17

HONG KONG

Parents Warned To Watch Out for Kawasaki Fever
(Chalina Chung; Hong Kong HONGKONG STANDARD, 3 Jul 86).... 18

Briefs
Second Cholera Victim 19
Third Cholera Victim 19
Cholera Outbreak Denied 19

HUNGARY

Briefs
AIDS Detection Laboratory 20

## INDIA

Mysterious Disease Killing Infants in Ranchi
(New Delhi PATRIOT, 6 Jul 86)............................ 21

Official Gives Details of Sunderbans Kala-Azar Epidemic
(Calcutta THE TELEGRAPH, 28 Jun 86)...................... 22

Bengal Fight Against Three Diseases Intensifies
(Calcutta THE STATESMAN, 1 Jul 86)....................... 23

Reports on AIDS Developments in Pune, Srinagar
(Calcutta THE TELEGRAPH, 28 Jun 86)...................... 25

Doctors Disagree on Diagnosis of AIDS
(Madras THE HINDU, 29 Jun 86)............................ 26

Dangers of, Fight Against AIDS in India Reviewed
(Madras THE HINDU, 1 Jul 86)............................. 27

Fear 'Exaggerated' 27
Reference, Surveillance Centers 30

Briefs

Arunachal Dysentery Deaths 33
Malaria in Cooch Behar 33

## INDONESIA

Briefs

Cholera Outbreak in North Sumatra 34

## MALAYSIA

Warning Issued on Massive Dengue Outbreak
(Robert Goh; Kuala Lumpur NEW STRAITS TIMES, 7 Jul 86).... 35

Dengue Cases Reported Increasing in Penang
(Penang THE STAR, 7 Jul 86).............................. 36

Health Ministry Reports Four AIDS Carriers
(Penang THE STAR, 4 Jul 86).............................. 37

Briefs

Dengue Fever Cases 38

## MOZAMBIQUE

Briefs

Beira Anti-Malaria Campaign 39

NICARAGUA

981 Cases of Malaria in Managua Through May
(Managua BARRICADA, 24 Jun 86)............................ 40

NIGERIA

Briefs

AIDS Advisory Committee Formed 42
Measles, Meningitis Cases 42
Tsetse Fly Research 42
TB Cases in Lagos 43

NORWAY

Physicians Warn 20,000 AIDS Cases by 1988
(Lone Hansen; Oslo ARBEIDERBLADET, 27 Jun 86)............ 44

SINGAPORE

Health Authorities Issue Dengue Alert
(Kuala Lumpur NEW STRAITS TIMES, 3 Jul 86)................ 46

SOUTH AFRICA

Briefs

TB Epidemic in Cape Town 47

SPAIN

Increase Seen in Reported Cases of Viral Hepatitis
(Madrid EL PAIS, 3 Jul 86)................................ 48

100,000 Hepatitis B Virus Carriers Reported in Madrid
(Madrid EL PAIS, 8 Jul 86)................................ 50

AIDS Cases Seen Tripling by 1988
(Madrid YA, 25 Jun 86).................................... 52

TANZANIA

Briefs

AIDS Deaths Reported 54

TRINIDAD AND TOBAGO

AIDS Foremost Killer; Racial Factor Being Studied
(Norris Solomon; Port-of-Spain SUNDAY GUARDIAN,
20 Jul 86)................................................ 55

TURKEY

Higher Malaria Incidence Reported in 1986
(Hatice Ozer; Istanbul MILLIYET, 31 May 86).............. 58

UGANDA

Briefs
Bubonic Plague in Northwest 60

UNITED KINGDOM

1985 Health Statistics for Scotland Released
(David Appleton; Edinburgh THE SCOTSMAN, 23 Jun 86)....... 61

Malaria Brought by Asian Immigrants Sparks Concern
(John Furbisher; Leeds YORKSHIRE POST, 2 Jul 86).......... 62

Hospital Doctor Vacancies Forcing Treatment Restrictions
(David Fletcher; London DAILY TELEGRAPH, 17 Jun 86)....... 63

Briefs
Hospital Waiting Time Cut 64

ZIMBABWE

Briefs
2,500 Children Vaccinated 65

ANIMAL DISEASES

CANADA

Ducks Reported Dying in Hamilton Harbor Pollution Test
(Michael Keating; Toronto THE GLOBE AND MAIL,
17 Jul 86)................................................ 66

Briefs
Nova Scotia Harbor Pollution 67
West Coast Red Tide 67
Shellfish Harvest Ban 67
Okanagan Lake Fish Disease 67

NORWAY

CEM Venereal Disease Seen Hurting Horse Exports
(Arne M. Bakken; Oslo AFTENPOSTEN, 30 Jun 86)............. 68

ZIMBABWE

Briefs
Animal Disease Fight Urged 69

## PLANT DISEASES AND INSECT PESTS

CANADA

Briefs
Manitoba Bee Quarantine 70

DOMINICA

Briefs
Mango Weevil Disease 71

MEXICO

African Bee Control Strategy To Involve Hybridization
(Mexico City EXCELSIOR, 14 Jun 86)........................ 72

NIGER

Locust Threat, Preventive Campaign Outlined by Official
(Ismale Mouddour Interview; Niamey LE SAHEL DIMANCHE,
1 Jun 86)................................................ 73

SEYCHELLES

Briefs
Locust Alert in Victoria 77

SOUTH AFRICA

Locusts Expected in Reef
(Hannes deWet; Johannesburg THE STAR, 22 Jul 86).......... 78

UNITED KINGDOM

'Pioneering' Experiment To Control Forest Pest Delayed
(Brian Pendraigh; Edinburgh THE SCOTSMAN, 30 Jun 86)...... 79

VIETNAM

Notice Issued on Rice Pests, Eradication Measures
(Hanoi Domestic Service, 19 Jul 86)....................... 80

/12223

# GOVERNMENT BACKS ANTI-MALARIA VACCINE EFFORTS

Melbourne THE AGE in English 24 Jun 86 p 3

[Article by Bill Birnbauer]

[Text]

The Federal Government has backed Australia's biggest and most risky biotechnology project — the development of an anti-malaria vaccine — with $5.2 million.

The Australian Industry Development Corporation, which will take 40 per cent equity in the project, believes its investment will keep Australian researchers ahead in the world race for a vaccine.

The director of the Walter and Eliza Hall Institute, Sir Gustav Nossal, yesterday welcomed the money but said that scientists overseas were conducting similar research and that the undeveloped countries which would benefit most had little capacity to pay for a vaccine.

Sir Gustav said malaria was one of the main health problems in developing countries and that 300 million people suffered either acute or chronic malaria. The disease killed about two million people each year. It was no hyperbole to say malaria was "rampaging out of control," he said.

"We have at no stage hidden from the Government or from our funding partner, the AIDC, the fact that this is and remains commercially a high-risk venture," he said.

The other partners in the project are the Commonwealth Serum Laboratories, the Queensland Institute of Medical Research and a private company, Biotechnology Australia. The project is based on a breakthrough in cloning antigens for the deadliest strain of malaria by scientists in 1983 at the Walter and Eliza Hall Institute.

The chief executive of the AIDC, Mr Robert Thomas, said yesterday it would have been catastophic to give away Australia's lead in the area or allow the research to go overseas. "We still have a strong view we are leading the world," he said.

The $5.2 million, which will be paid over three years, will be made available under the AIDC's national interest provisions, which enable the corporation to assist projects which do not fall under normal commercial guidelines.

It is the first time the provisions, which must be approved by both Houses of the Federal Parliament, have been used. Mr Thomas said the other partners would contribute an equal amount through the work they did. A commercial vaccine could be ready within five years.

Sir Gustav said there had been no shortage of offers from overseas drug companies to support the research. "We wanted to make it a test case of whether Australia could completely go it alone," he said. This did not preclude the entry of a multinational company to market and distribute internationally a successful vaccine.

Health authorities are concerned by the spread of drug-resistant malaria strains, particularly in South East Asia, South America, India and Africa. The capacity of parasites to change means that a vaccine must be broad enough to provide protection against all strains.

The director of the Commonwealth Serum Laboratories, Dr Neville McCarthy, said yesterday the ultimate vaccine probably would result from a global assortment, with Australia supplying its component antigen under licence.

/9317
CSO: 5400/4396

# ISSUE OF IMMIGRANTS WITH ACTIVE TUBERCULOSIS DISCUSSED

Toronto THE GLOBE AND MAIL in English 16 Jul 86 p A5

[Article by Victor Malarek]

[Text] Scores of immigrants are entering Canada every year with potentially infectious tuberculosis. They could pose a health threat to Canadians, a senior medical officer with Health and Welfare Canada said yesterday.

Despite concerns raised by federal and provincial health officials, federal spending cutbacks have resulted in the shelving of a health study which could have shown how this is happening, said Dr. Mary Jeanne Ferrari, director of immigration medical services for Health and Welfare Canada.

Dr. Ferrari also said that the Government has closed three overseas medical offices and slashed by eight the number of Canadian medical officers who screen potential immigrants in posts abroad.

Her office, which screens tuberculosis cases for all of Canada, has lost two medical officers from a staff of four, which has resulted in a three-month backlog.

Statistics Canada figures show that between 1975 and 1984, more than 1,000 newcomers were found to have active, infectious tuberculosis within the first year of their arrival.

Dr. Ferrari stressed that "TB can still cause epidemics. There was an epidemic not so long ago on an Indian reserve in Manitoba. There is a potential for spreading TB if you don't know somebody has it and he's living in crowded circumstances, which a lot of immigrants do."

What Dr. Ferrari finds even more "alarming and upsetting" is that many of these immigrants have apparently been given a medical clearance from doctors, clinics and laboratories in their homeland.

The worst abusers, she said, come from Southeast Asia, where an individual wanting to emigrate could buy a good chest X-ray, substitute his sputum (saliva) sample with that of a relative or bribe an official.

Dr. Gordon Jessamine, who is with the bureau of communicable disease epidemiology at Health and Welfare Canada, said he is aware of the issue that Dr. Ferrari has raised but feels that it does not pose "a great big, major public health problem."

Dr. Jessamine said that if these immigrants are routed into the "public health tuberculosis control system," they would receive adequate treatment and eventually be cured or rendered non-infectious.

He added, however, that he does share Dr. Ferrari's concern "that many active cases will not report to health authorities" upon arrival to Canada.

/13104
CSO: 5420/86

## CLEANUP OF CAPE BRETON CANCER-LINKED POND PLANNED

Ottawa THE CITIZEN in English 21 Jul 86 p A10

[Text] HALIFAX (CP) — A chemical-ridden pond, linked with water pollution and cancer in the industrial Cape Breton city of Sydney, will be cleaned up over the next five years, provincial and federal officials announced Monday.

"There is no question it is going to be good for the community," said Sydney Mayor Manning MacDonald hours after the announcement. "You have to be here to see it — it is a blight right in the middle of Sydney."

The controversial pond, which belongs to the Sydney Steel Corp., contains more than 500,000 tonnes of coal-tar deposits, accumulated over the last 80 years. Federal Environment Minister Tom McMillan, who recently called the pond the worst waste-disposal site in the East, has been pushing for the cleanup.

"The cleanup will be major, it will be very substantial," said McMillan, who had met with provincial resistance. "It will be the elimination of the single biggest, most major industrial disposal site in Atlantic Canada."

McMillan, interviewed from Ottawa, said the cleanup will cost $34 million. Sysco's aging coke ovens, which are responsible for some of the chemicals, will be closed by July 1988, he said.

Despite studies linking the pond with cancer, many people were opposed to plans to close the ovens. Premier John Buchanan, worried about 50 jobs at the ovens, had insisted that they stay open until 1990.

"Mr. McMillan and I have an agreement that all of the men who are employed in the coke ovens in 1988 will be employed in the tar ponds cleanup," Buchanan said Monday. "It is a solid agreement."

Buchanan said most of the men working in the ovens will be employed in the cleanup, which is expected to generate 200 jobs over the next five years.

But there were still concerns in Sydney, a steel-and-coal town struggling with an unemployment rate of 26 per cent, that people could be thrown out of work.

"We're going to lose 125 jobs, directly and indirectly," said John Callahan, president of the local steelworkers' union. "We have to get a meeting with the premier as soon as possible."

MacDonald said he hopes that men now working in the coke ovens be put to work in other Sysco operations, preferably in a multimillion-dollar modernization at the aging plant.

"I'm looking forward to the day when the site is cleaned up... " MacDonald said. "Hopefully, we can have something here in the city of Sydney that we can be proud of."

/13104
CSO: 5420/87

CANADA

# ONTARIO REPORTS WORST RABIES OUTBREAK IN PROVINCE HISTORY

Toronto THE TORONTO STAR in English 2 Jul 86 p A3

[Article by Marianne Steeves]

[Text]

Ontario health officials are battling the worst outbreak of rabies in the province's history.

The Ministry of Health says 1,469 people were treated for exposure to rabies in the first four months of this year, an increase of more than 147 per cent from last year.

"It's going to be a record year. It doesn't seem to follow the old patterns that we used to expect," said Dr. Alvin Evans, senior veterinary consultant with the ministry.

Evans estimates more than 4,000 people will be treated this year, compared with 2,150 treated last year and 2,027 in 1984.

In Southern Ontario, one of the worst places in North America for rabies, there has been a steady increase in cases. It was first discovered here in 1956.

## Serious disease

Though it has been 19 years since it killed anyone in Ontario, it's still considered a serious disease that's 100 per cent fatal if not treated.

Wild animals, especially foxes and skunks, make up 80 per cent of those infected. But over 60 per cent of people treated are infected by domestic animals.

The province introduced legislation in January giving municipalities the power to make pet vaccinations compulsory. But so far only nine municipalities have done so :East York in Metro, Pine Ridge, Haliburton-Kawartha, Kingston, Frontenac, Lennox, Addington, Haldimand-Norfolk and Peterborough.

In Metro, where outbreaks are often caused by rabid skunks, the ministry is studying trapping, vaccinating and releasing them, said Dr. Charles MacInnes, supervisor of wildlife research for Ontario's natural resources ministry.

Veterinary scientists are baffled at the problem of rabies in the province. It usually occurs in cycles and disappears for years at a time, but the disease is always prevalent in Ontario wildlife.

Roly Tinline, a geography professor at Queen's University, thinks the prevalence may be linked to the province's terrain — small isolated forests on farms, joined by rural roads.

Acting like a "giant chain letter," animals travel between wooded areas, carrying the disease with them, Tinline said.

Ontario foxes have almost double the normal reproduction rate, giving rabies a constant supply of animals to live on, he said.

/13046
CSO: 5420/83

# AIDS RISK, VANCOUVER PROSTITUTES TEST RESULTS DISCUSSED

## Physician on Risk

Toronto THE GLOBE AND MAIL in English 8 Jul 86 p A2

[Text]

A Vancouver physician says an increasing number of people who are exposed to the AIDS virus run the risk of developing the deadly disease.

Dr. Lindsay Lawson recently attended an international conference in Paris on acquired immune deficiency syndrome. She said information at the conference showed that the longer a person has tested positive for AIDS antibodies, the greater the chance of developing the disease.

"It was thought it was about 5 to 10 per cent who (have come in contact with the virus) would eventually get AIDS," Dr. Lawson said. But she said it now appears that figure will be a little higher, suggesting it could rise to about 20 per cent, but refusing to give a specific figure.

Dr. Lawson, a respirologist at St. Paul's Hospital in Vancouver, said an estimated 4,000 to 6,000 people in British Columbia have been exposed to the AIDS virus.

## Vancouver Prostitute Testing

Vancouver THE SUN in English 19 Jun 86 p A3

[Text]

None of the prostitutes tested at the government AIDS clinic in Vancouver have registered positive for exposure to the virus, the director of the clinic told public health officials attending a national convention here Wednesday.

Dr. Michael Rekart, who presented statistics from the first six months of clinic's operations, said of 21 prostitutes who fit into high-risk categories for acquired immune deficiency syndrome by either being IV drug users or by sexual contact, none had antibodies for exposure to the virus.

Since the clinic opened eight months ago about 3,800 people have been tested, Rekart told members of Canadian Public Health Association. He said of 3,447 people tested in the first six months, 536 samples (16 per cent) were positive.

/9274
CSO: 5420/81

# AIDS INCIDENCE, COUNTERMEASURES DISCUSSED

## 614 Cases Reported

Ottawa THE CITIZEN in English 11 Jul 86 p A4

[Article by Andy Ogle]

[Text] MONTREAL — Rushing in with the harried look of a juggler trying to keep too many balls in the air at once, Dr. Norbert Gilmore apologizes for being late.

He had been seeing a young man who may be the first in the world to get the AIDS virus after getting a tattoo, he explains, while leading the way into his tiny 11th floor office in Montreal's Royal Victoria Hospital.

Because of patient confidentiality, Gilmore doesn't say much more about the case but because it differs in this small way from other cases, he does allow that the U.S. Navy is very interested.

The patient, who had the tattoo done on impulse two years ago after an evening of drinking with buddies, is holding his own.

On another level, the unfortunate man is one more AIDS statistic — numbers that are growing daily.

The latest count in Canada is 614 cases of whom 311 have died. Canada now has the largest AIDS burden in the industrialized world after the U.S.

The rate of increase shows no sign yet of abating, doubling every year. By the end of this year 1,000 Canadians will have developed AIDS.

But the incidence is expected to level off and earlier predictions of 20,000 Canadian cases by 1991 now look unlikely.

Still, even at lower estimates of 7,000 cases, by then AIDS could have cost an already-overburdened health care system $500 million.

Government response has been slow. Until this spring, relatively little money was available for research, patient care or support groups.

In May, Health Minister Jake Epp announced the federal government would put $39 million over five years into the AIDS battle.

Part of the money was used to set up the National AIDS Centre in Ottawa to co-ordinate the AIDS fight and act as an information clearing house. One of its first jobs was to solicit research proposals.

More than 100 were received, dealing with everything from trials of anti-viral drugs to educational programs and proposals for dealing with the social, psychological and emotional problems associated with the disease, says acting director Kim Elmslie.

The move comes amid alarming evidence on the virulence of the disease, including new information from last month's international congress on AIDS in Paris.

Reports suggest millions of people in central Africa could be infected by the virus where 100,000 or more men and women already have AIDS. In the U.S., which has had 22,000 cases, the incidence of heterosexual spread of the disease, though small, is growing.

And more of those infected are developing full-blown AIDS. Thought to be only five to 10 per cent at first, it's now estimated to be in the 25-to-30 per cent range, and some experts say the virus could eventually cause AIDS in everyone it infects.

Is the new federal funding enough to mount an effective attack? Just a week after Epp's announcement, a Commons committee studying AIDS recommended spending $12.5 million this year and $10.9 million a year after that.

"We may need more," says Gilmore, who has headed the National Advisory Committee on AIDS since it was set up in 1983. "But one thing the program has done is stimulate innovative research."

Meanwhile, he says, the message from Paris is that despite major advances, AIDS prevention is still the only real weapon available.

While most of the new anti-viral drugs, some of which will be used in clinical trials this year in Canada and the U.S., appear to be not too effective, they may offer a pathway to future drugs, he says.

In theory, prevention is simple, says Gilmore. "But our attempt to eliminate sexual diseases in the past has not been that great."

It's important for people to realize AIDS is not a homosexual disease, Gilmore adds.

"The basic concept is if your partner is infected, you are at risk."

Heterosexual spread is not a major factor in Canada because few people are infected outside the main risk group of homosexual and bisexual men, who account for 80 per cent of the cases.

So far, there have been only two cases among intravenous drug users, a major worry to health authorities. In New York City, says Gilmore, many intravenous drug users are women and they support their habit by prostitution.

David Cassidy, an AIDS worker with Montreal's Ville Marie Social Services, says the heterosexual population can benefit from what's happened to the gay population.

"But I don't think they perceive themselves to be at risk enough to be bothered with it. Unfortunately that's where the disease is going to grow.

"The drug users in New York City are half the cases now and that's a heterosexual problem. There are 7,000 prostitutes in Montreal and that's a very high-risk population."

## British Columbia Incidence

Vancouver THE SUN in English 25 Jun 86 p A3

[Article by Anne Mullens]

[Text] A cluster of new AIDS cases in Vancouver in the last few weeks brings to 145 the number of people who have contracted the disease in B.C., AIDS Vancouver director Bob Tivey said Tuesday.

"Everyone thought it was levelling off earlier this year, but now it has jumped again," Tivey said. "It seems to come in groups. We'll go for a while without any new cases and then all of a sudden will get eight or nine."

In the last month the number across Canada has also jumped, with the total number of acquired immune deficiency syndrome cases approaching 700 last week,

**up from 540 at the end of April, Tivey said.**

**It is not known whether the apparent cluster effect is coincidence or a response to an environmental factor such as a change in seasons.**

**Doctors and researchers are meeting in Paris this week at the Second World Congress on AIDS. About six Vancouver doctors are attending the Paris conference.**

**So far about 70 people have died in B.C. from the disease.**

## Warrant for Prostitute

Toronto THE GLOBE AND MAIL in English 25 Jun 86 p A3

[Text] A bench warrant was issued yesterday for Donna Jean Newman, a 20-year-old Byward Market prostitute who says she is a carrier of the deadly AIDS virus, when she failed to appear in provincial court to face charges of breaching bail conditions.

Ms Newman told police when she was charged with soliciting in May that she had been exposed to the virus that causes acquired immune deficiency syndrome. Shortly afterward, she was freed on bail to await trial.

She was rearrested later in May for breaching three bail conditions and was released a second time after a brief court appearance.

AIDS is a fatal syndrome that destroys the body's ability to fight disease. It is transmitted through blood and other bodily fluids.

## Winnipeg Hospital Policy

Toronto THE TORONTO STAR in English 16 Jul 86 p A10

[Text]

WINNIPEG (CP) — Workers at Winnipeg's Health Sciences Centre who suffer from AIDS or related diseases could be forced to take a leave of absence under new policy guidelines, the hospital says. The policy, approved July 9, also says they could be banned from performing certain tasks. However, such steps would only be taken if hospital officials believe the employee poses a potential risk to the health of others.

/13104
CSO: 5420/85

## SUSPECT CANS OF COKE CLASSIC REPORTED IN ONTARIO

Windsor THE WINDSOR STAR in English 11 Jul 86 p D8

[Text]

Reports of suspect cans of Coke Classic have surfaced in five southern Ontario communities, but company officials are clinging steadfastly to a "clean bill of health" issued by the federal Health Department.

Dr. Colin Broughton, director of Ontario region for the federal Health Protection Branch, said Thursday tests have confirmed "there's nothing wrong with the product, that the Brantford incident is an isolated incident."

Members of a Brantford family became ill and were admitted to hospital with stomach cramps last week after drinking from cans with the serial number K6L160.

The most recent complaint emerged Wednesday in London, where two workers at Westinghouse Canada reported an unusual taste, but no illness, after drinking cans of Coke Classic bought from a plant vending machine.

While welder Larry Hitchcock described it as "a perfumy taste," assembler Steve Langille said the can he drank from had "a metal or steel taste — it was a rotten taste."

Gordon Carless, a service representative of Canteen Canada Ltd. of London which stocks the Westinghouse vending machines, said the two complaints were the first Canteen had received and two cans he tasted were fine. He speculated the reaction was "psychological" because of recent news reports of contamination.

Dr. Douglas Pudden, medical officer of health for London and Middlesex County, is advising area residents to return cans from lot K6L160 or K6L161 to retailers. In a telephone interview, he said he is acting on the advice of federal health officials based in London, who described the matter as a "quality control" problem.

"We haven't found anybody who's really sick," he said, despite a dozen calls from concerned consumers.

**THE HEALTH** protection branch in Toronto has completed its investigation, although it has not tested actual samples from Niagara Falls and Fort Erie, where complaints of a kerosene-like smell in the cans have been reported.

But it has tested dozens, perhaps hundreds, of cans from the same batch, Broughton said. As well, already opened samples tested from a complaint in Hamilton were found to be safe.

Doug Mepham, spokesman for Coca Cola Ltd., said the company and local officials are looking for the cause of contamination in cans purchased by the Brantford family, which were found to contain "a petroleum distillate."

Broughton said the health protection branch has received 30 or 40 telephone calls from the public, asking if Coke Classic is safe to drink.

Mepham said 15,000 to 20,000 cases of 24 cans each, marked with the serial number K6L160, were distributed to the densely populated Golden Horseshoe area of southern Ontario where complaints are originating.

Company president Neville Kirchmann has promised to exchange Coke Classic in cans "without question."

/13104
CSO: 5420/86

# ONTARIO DOCTORS CALL OFF STRIKE AGAINST EXTRA-BILLING BAN

Toronto THE GLOBE AND MAIL in English 5 Jul 86 pp A1, A2

[Text]

The Ontario Medical Association, saying it was getting nowhere against a provincial Government that would not budge, yesterday called off the province-wide doctors' strike.

The strike was called on June 12 to protest against Ontario legislation banning extra-billing. The legislation became law on June 20.

The full-scale strike will officially end on Monday, but OMA president Dr. Richard Railton said doctors will continue to hold rotating strikes around the province "to keep the fight alive."

Dr. Railton complained about the Liberal Government's intransigence in explained the decision to end the strike. It was made by the OMA's 250-member governing council after a day-long emergency meeting.

The 17,000-member OMA had to change direction in large part because of the "callous attitude and disregard" of the Government, he told a Toronto press conference.

He said the doctors "began to realize that we were facing really tough opposition who have thrown tremendous resources of time and money and personnel into the fray in such a manner that we were unable to match it and get through to the public to educate them as to the real problems."

Asked by The Globe and Mail the reasons why the OMA could not get its message to the public, Dr. Railton replied: "I won't say I'm looking at one of them, but I think that there had been a misunderstanding."

The legislation, called "An Act Regulating the Amounts that Persons may charge for rendering Services that are Insured Services under the Health Insurance Act," makes it illegal for doctors to charge above the Ontario Health Insurance Plan rate for insured medical services.

Dr. Railton said doctors will continue to fight the law, up to and including the next provincial election. He said, however, that the strike was called off because most doctors "realized we were going to have to change directions."

The OMA had the alternative of deciding to increase sanctions in the face of the Government's firm stand, Dr. Railton said.

A move to "shut down the system" would provoke an immediate reaction from the Government, but the Government would be likely to "quite coldly and callously . . . let things go on until some very serious results happen," he said.

Dr. Railton said he did not blame the me-

/9274
CSO: 5420/81

CANADA

# 'ACUTE SHORTAGE' OF NURSES REPORTED IN BRITISH COLUMBIA

Vancouver THE SUN in English 3 Jul 86 p B1

[Article by Ann Mullens]

[Text] An acute shortage of nurses in the province continues to cripple a number of B.C. hospitals, forcing cuts in surgery and bed closures.

St. Paul's Hospital, which last month reduced open heart surgery cases from 15 to six a week because it did not have enough critical care nurses to look after the patients, has had to further cut surgery to five a week, close wards and shift nurses to "consolidate nursing staff."

Monday, the hospital closed two wards of 25 and 35 beds and its 10-bed critical care recovery room, spokesman Faye Cooper said.

The critically-ill patients normally looked after there will now be in the intensive care unit, which has expanded from 12 to 15 beds, or the post-anesthetic recovery room, which has extended its hours to a 24-hour operation. The nurses from the two closed wards, who are experienced in looking after respiratory and cardiac cases, will be pooled with the nurses in ICU and PAR.

"We have consolidated our critical care areas so that all the nurses are in a geographically tight area," Cooper said. "This is a short-term solution to the problem. We are closing beds and shifting nurses so that patient services are least affected.

"In the long term we are actively recruiting nurses in the East."

St. Paul's, which has vacancies for more than 20 critical care nurses and 15 vacancies in other areas, is only one of a number of hospitals in the province facing serious shortages in nursing staff.

In a recent survey, the Registered Nurses Association of B.C. reported there are 482 nursing positions vacant in the province, with about 230 of those in the Lower Mainland. Shortages are expected to worsen, peaking in July and August when more nurses take holidays, said Pat Cutshall, executive director of the RNABC.

Nursing shortages are also curtailing surgery in other areas. As of Monday, the Royal Jubilee Hospital in Victoria closed three of 16 operating rooms and cut elective surgery by 15 cases a week.

"The shortage continues to be a problem," said Peter Walton, spokesman for Vancouver General Hospital.

Statistics from the RNABC, the B.C. Nurses Union and the B.C. Hospital Association show that in the past two years nurses have not been moving to B.C. in the same numbers as in years past.

"Our association is extremely concerned because the registration of new nurses is down at least six per cent this year," said Gloria Parker, president of the RNABC. The associations figures show there were 220 fewer new registrants in B.C. in 1985 than in 1984.

The RNABC and BCNU say the problem is largely caused by the failure of nurses' salaries in B.C. to keep up to the rest of Canada.

Starting pay for nurses in B.C. is $25,152 compared with $28,420 in Alberta and $27,687 in Ontario.

/13104
CSO: 5420/86

## TREE PLANTERS' SYMPTOMS OF HERBICIDE POISONING REPORTED

Toronto THE GLOBE AND MAIL in English 8 Jul 86 p A9

[Article by Christie McLaren]

[Text] Several tree planters in Northern Ontario are showing symptoms of pesticide poisoning after two aircraft working for the provincial Government sprayed an area with the weed-killer 2,4-D last week.

About 15 planters are experiencing various symptoms, including headaches, nausea, vomiting, diarrhea, muscle soreness and weakness and a sense of lethargy, which are textbook indications of a relatively high exposure to the herbicide.

The spraying, which took place on June 30 about 90 kilometres north of Elliott Lake, at first affected 13 people planting trees about half a kilometre from the area, planters said in interviews.

As the two small planes banked to make another circuit, they shut their sprays off and flew directly over some of the planters.

"I could feel the drops," said Walter McDonald, 29, of Kamloops, B.C. "I didn't get soaking wet, but the smell was there. It wasn't a mist you get wet with."

That afternoon, he said, "I was feeling sick and nauseous and headachey. Directly after I got sprayed I started to get headachey, and feeling really burnt out, tired, no energy, didn't feel like doing anything."

Mr. McDonald and fellow planters Stephen Kaasgaard and Steven Klausen said that, in the next three days, the rest of the crew worked in areas in which there was a strong odor of the spray.

They began to complain of feeling unwell, and some of them, experiencing fatigue and lethargy, stopped work early and returned to the camp.

Four or five planters sought treatment last weekend at St. Joseph's Hospital in Elliott Lake. They were examined and released, a hospital spokesman said.

Three planters who felt ill have quit and gone home, two others intend to quit and one has moved to plant trees in a camp 100 kilometres away, said a spokesman for their employer, Cedar Snag Silviculture Ltd. of Kleinburg, Ont.

The spray incident and the planters' complaints of sickness are being investigated by the Ontario Ministries of Labor, Natural Resources and Environment.

However, Bruce McGauley, a Natural Resources spokesman, said yesterday the planters' flu-like symptoms could easily be explained by other things.

"It could be the flu, it could be the food, it could be the dampness of sleeping on the ground in tents. It just could have been the fatigue from working."

Without blood and urine tests, Mr. McGauley said, "we're pretty hard-pressed to state conclusively that this is a case of herbicide poisoning."

He said no blood and urine tests have been ordered, however, because it has been several days since the workers were exposed and probably nothing would show up.

However, Mr. McGauley said while flu-like symptoms occur with high exposure to 2,4-D, the planters would not have been exposed to such levels.

Three people are reported to have died from ingesting large amounts of 2,4-D by mouth, a 1985 report on the use of herbicides in forestry by a Saskatchewan task force says.

The herbicide is considered to be moderately toxic.

But in some individuals, the task force said, contact with the skin is enough to cause "severe peripheral neuropathy."

The planters said that junior Ministry of Natural Resources employees in the area told them that the spraying was probably an error.

"There was no warning, or anybody telling us they were going to spray," Mr. Kaasgaard, 27, of Brampton, Ont., said. He said a ministry employee was surprised to discover aerial spraying in the vicinity that morning.

Usually, before pesticides are sprayed from the air, the ministry sets up roadblocks on logging roads and ensures that tree-planters are working elsewhere. The bans are lifted hours or days after the spraying.

But Mr. McGauley said no error was made.

He said ministry officials responsible for the spraying knew the tree planters were in the general area that day and that the spraying took place at "an adequate distance" away — at least half a kilometre.

Since the incident, the ministry has checked for wilted vegetation — a sign of pesticide drift — and found none within half a kilometre of where the planters were working last week, Mr. McGauley said.

/9274
CSO: 5420/82

## BRIEFS

LAKE CLOSED TO GROUP BAPTISM--A group of evangelical Christians attending a campout here may want to pray for clean water - the man-made lake where they hoped to perform baptisms has been closed by the local health board because of an infestation of toxic algae. The organizers of the Jesus'86 outing, which began Thursday night, are making contingency plans to use "something local like a swimming pool," said spokesman Mike LeClair. Eighty people were baptized at the Jesus '85 campout in Kitchener and at least as many are expected to be baptized during this year's four-day event. Mike Bragg, a spokesman for the Oxford County Board of Health, said swimming in the lake could provoke skin irritation, diarrhea or eye, ear and nose infections. [Text] [Toronto SATURDAY STAR in English 19 Jul 86 p B8] /13104

1985 CHLAMYDIA INCIDENCE--Winnipeg--A fast-spreading venereal disease that can cause infertility struck 7,884 Canadians last year, with one-third of the cases reported in Manitoba. Federal statistics show that Manitoba had more cases of chlamydia than any other province except Ontario but officials believe the province's relatively high numbers are attributable to a higher rate of detection rather than a greater incidence of the disease. Dr. Greg Hammond of Cadham Provincial Laboratory in Winnipeg said Manitoba uses a diagnostic test that allows a doctor to obtain results on the same day. The more time-consuming test used in other provinces has caused false negative results. [Text] [Vancouver THE SUN in English 16 Jun 86 p A11] /9274

CSO: 5420/82

## BRIEFS

**AIDS TASK FORCE**—St George's, 23 Jul (CANA)—The Grenada Government has set up a task force to look at ways and means of dealing with the dreaded AIDS disease, Health Minister Danny Williams said. The move is precautionary, because there have been no reported diagnoses here of the disease, which breaks down the body's immune system. "We have sent down to Trinidad and Tobago, someone to be trained there, so that any time there is an area of risk, we would be able to take samples to follow up to see that we don't have this thing established here," Williams said. His disclosure came in the wake of a newspaper here which said a teenaged girl had contracted the disease. Williams said the report was erroneous. [Text] [Port-of-Spain TRINIDAD GUARDIAN in English 24 Jul 86 p 5] /9274

CSO: 5640/103

# PLANS UNDER WAY TO IMPROVE REGIONAL HEALTH SERVICES

## Riverain-Area Benefits

Georgetown GUYANA CHRONICLE in English 5 Jun 86 p 5

[Text]

RESIDENTS along the riverain areas of the Demerara and the Barima-Waini rivers will have improved and expanded health services with the acquisition of boats by the Ministry of Health for use by its personnel in these areas.

The boat assigned to the Demerara River will be used to serve residents in Regions Ten and Three. From Christianburg the boat will be used as far as Muritaro, a location 21 miles from Wismar. From the Soesdyke end, the boat will cater for residents at Endeavour, Sand Hills, Potosi, La Harmonie, Santa Mission, Low Wood, Princess Caroline and Susannahs Rust.

The Ministry of Health also recently introduced a Dental Service for residents along the Demerara River. A dental chair has been placed on the boat and this service has proven a great help to the residents.

Similar dental chairs will be installed on boats to provide a service for residents in the Charity, Mabaruma and Mahaicony riverain areas.

The boat at Mabaruma replaces the old one that has been out of order for some time. It will be used to carry health personnel to all locations along the Barima-Waini rivers.

## Training Workshops

Georgetown GUYANA CHRONICLE in English 5 Jun 86 p 5

[Text]

THE Ministry of Health has commenced a series of workshops aimed at training health personnel in various regions in the planning and development of information systems.

The objectives of the workshops are to improve the data collection skills of participants while assisting them in developing a data base for use in the planning of regional health programmes and determining priorities based on existing health needs. They are also expected to develop skills in planning and programming for regional health programmes.

So far three workshops have been held in Region Three and one each on the East Coast and East Bank in Region Four. Participants included the Regional Health Officers, and officials of the Regional Democratic Councils.

The East Bank workshop in Region Four was declared open by Minister of Health Dr. Richard Van West-Charles, while the workshop in Region Three was declared open by Cde. Angad Rupee, Regional Chairman.

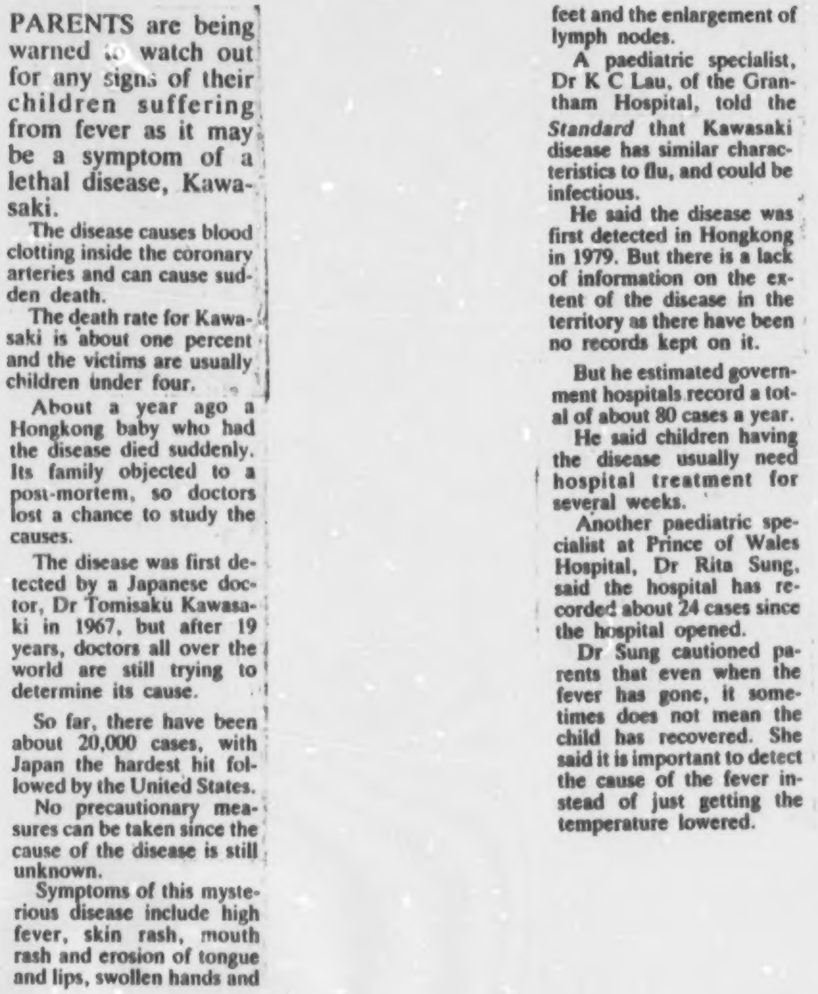
Region Four Chairman, Cde Alan Munroe opened the programme on the East Coast, Demerara.

/9274
CSO: 5440/098

# PARENTS WARNED TO WATCH OUT FOR KAWASAKI FEVER

Hong Kong HONGKONG STANDARD in English 3 Jul 86 p 2

[Article by Chalina Chung]



[Text] PARENTS are being warned to watch out for any signs of their children suffering from fever as it may be a symptom of a lethal disease, Kawasaki.

The disease causes blood clotting inside the coronary arteries and can cause sudden death.

The death rate for Kawasaki is about one percent and the victims are usually children under four.

About a year ago a Hongkong baby who had the disease died suddenly. Its family objected to a post-mortem, so doctors lost a chance to study the causes.

The disease was first detected by a Japanese doctor, Dr Tomisaku Kawasaki in 1967, but after 19 years, doctors all over the world are still trying to determine its cause.

So far, there have been about 20,000 cases, with Japan the hardest hit followed by the United States.

No precautionary measures can be taken since the cause of the disease is still unknown.

Symptoms of this mysterious disease include high fever, skin rash, mouth rash and erosion of tongue and lips, swollen hands and feet and the enlargement of lymph nodes.

A paediatric specialist, Dr K C Lau, of the Grantham Hospital, told the *Standard* that Kawasaki disease has similar characteristics to flu, and could be infectious.

He said the disease was first detected in Hongkong in 1979. But there is a lack of information on the extent of the disease in the territory as there have been no records kept on it.

But he estimated government hospitals record a total of about 80 cases a year.

He said children having the disease usually need hospital treatment for several weeks.

Another paediatric specialist at Prince of Wales Hospital, Dr Rita Sung, said the hospital has recorded about 24 cases since the hospital opened.

Dr Sung cautioned parents that even when the fever has gone, it sometimes does not mean the child has recovered. She said it is important to detect the cause of the fever instead of just getting the temperature lowered.

/13046
CSO: 5450/0174

## BRIEFS

**SECOND CHOLERA VICTIM**--The Medical and Health Department yesterday confirmed a second case of cholera in Hongkong. The department said a 43-year-old man admitted to the Prince of Wales Hospital last Friday has been found to be suffering from cholera. He was later transferred to the Princess Margaret Hospital and is reported to be in good condition. The patient is a construction worker who lives in Tai Po. As he had not travelled abroad recently, the department classified the case as a local one. Health officers from the department have visited the patient's wife and three children. The family members were medically examined and given preventive drugs, and the patient's home was disinfected by staff from the Regional Services Department. A department spokesman said that since there has been no secondary case there is no need to declare Hongkong a cholera-infected area. [Text] [Hong Kong HONGKONG STANDARD in English 25 Jun 86 p 1] /9274

**THIRD CHOLERA VICTIM**--The Medical and Health Department yesterday confirmed that an Indonesian woman visiting Hongkong is suffering from cholera. Since the patient came from overseas, the case, the third this year, has been classified as "imported." The 34-year-old woman arrived in Hongkong from Indonesia with five relatives last Monday and developed diarrhoea the next day. She was admitted to Queen Elizabeth Hospital on Thursday and was transferred to Princess Margaret Hospital yesterday in satisfactory condition. A department spokesman said since there has not been a secondary case, it was not necessary to declare Hongkong a cholera-infected area. Health officers visited the hotel where the woman and her relatives were staying and the rooms were disinfected by Urban Services Department. The relatives were examined and given preventive drugs. [Text] [Hong Kong SOUTH CHINA MORNING POST in English 8 Jul 86 p 23] /9274

CHOLERA OUTBREAK DENIED--Dongguan officials have discounted a press report of a cholera outbreak in the county, about 130 km north of Hongkong. The report in the pro-Taiwan HONGKONG TIMES claimed that at least 10 people had died in the town of Shatouxiang and that the export of laichees, a favourite fruit at this time of the year, had been suspended. It also said cholera had spread to the nearby towns of Humen and Taiping. A spokesman for the Dongguan county government said he had not heard of the cholera outbreak, neither had an official with the public security authorities. Several local tourist agencies, operating laichee tours to Dongguan, also denied knowledge of the outbreak. The honorary president of the International Chinese Tourist Association, Mr John Lam, said he was unaware of any epidemic in the county. "Of course, if the report about cholera is true, the operation of laichee tours must terminate," he said. Mr Lam did not expect local travel agencies and China to suffer great losses, even if there is an outbreak. [Text] [Hong Kong SOUTH CHINA MORNING POST in English 3 Jul 86 p 8] /13046

CSO: 5450/0176

## BRIEFS

AIDS DETECTION LABORATORY--Our newsreel has been given the opportunity to film--with the observance of the strictest safety precautions--at the Budapest laboratory of Koejal [public health clinic for contagious diseases] checking on the AIDS virus. At this laboratory blood samples provided by those coming in by their own volition and sent from hospitals are examined. This laboratory is one of the 40 set up on the instruction of the Ministry of Health. Some 5,000-6,000 blood samples can be checked here each year. Since 1985, Hungary has been supplying WHO with reports in every quarter. We have been authoritatively told that there are about 50 people in Hungary in whom the antibody of the AIDS virus has been detected. These people are kept under medical observation. [Excerpts] [Budapest Television Service in Hungarian 1730 GMT 27 Jun 86 LD] /6662

CSO: 5400/3024

## MYSTERIOUS DISEASE KILLING INFANTS IN RANCHI

New Delhi PATRIOT in English 6 Jul 86 p 6

[Text]

**Ranchi, July 5** — A mysterious disease has caused the death of many new born babies in the Khunti sub-division of Ranchi district.

The panic-stricken tribals of the area are turning to occult methods to save their babies from the disease.

Commonly called the 'Hiran Rog', (deer disease), the victims develop cracks in the skull two or three days after birth. The cracks subsequently expand with the passage of time and, within fortnight, the infants die.

Particularly prevalent in an endemic form in Hoonth, Dherang Hat, Rumchu and Arra villages of the Araki block of the Khunti sub-division, the disease poses the threat of killing the offsprings in most of the families in these villages and surrounding areas. There does not appear to be any immediate remedy for the affected children.

The villagers treat the patients with the paste prepared with the horns of deer and a kind of wild grass, which has so far proved ineffective.

The whole area appears to be devoid of any medical facilities causing the spread of such diseases as goitre, malaria and dysentry. There are at least two villages in the adjoining Tamar block namely Bursudih and Taladih, where cent per cent of the population is affected by goitre.

This becomes evident as soon as one approaches the villages and finds everybody, right from children to old folks with swollen and protruding necks. Commonly caused by iodine deficiency, even small children have fallen prey to the disease.

According to medical experts, goitre affects grown-ups, especially after the age of puberty in case of females.

The whole area is also malaria infested and almost every household is affected by it. Though the Government claims to have succeeded in eradicating the disease from most areas in the State, the poor adivasis of these villages have hardly ever been free from it.

With the onset of monsoon, the villagers also fear the outbreak of cholera in a virulent form. The memory of the last year which witnessed the death of 15 persons of the Harijan Colony near the Khunti town is still fresh in the minds of the people. They say hardly anything has been done this year to prevent the outbreak of the disease.

Neither has the State Government banned the sale of ordinary salt and pressed for free distribution of iodised salt nor has it taken care to disinfect drains and drinking water to prevent the disease caused by contaminated water and dirt.

/9317
CSO: 5450/0179

## OFFICIAL GIVES DETAILS OF SUNDERBANS KALA-AZAR EPIDEMIC

Calcutta THE TELEGRAPH in English 28 Jun 86 p 6

[Text]

Calcutta, June 27: More than 145 cases of kala-azar have been detected in a door-to-door survey in a dozen villages of Hingalgunge block of the Sunderbans. Dr Ashok Agarwal of the Bhorjuka Public Welfare Trust today, released the survey report, prepared by the trust along with Mr Tushar Kanjilal of the Tagore Society's Rangabelia project.

Dr Agarwal said the state government had failed to take steps to fight the disease even after an expert team from the School of Tropical Medicine pointed out that the desease had assumed epidemic proportions in the area. He said the health minister, Mr Ramnarayan Goswami, had ordered immediate preventive spraying of DDT, but the health department had no funds to take the action as there is no budgetary allocation to fight kala-azar.

An expert team from the School of Tropical Medicine comprising Dr K.K. Mullick, Dr A.K. Hati and Dr A. Nandy had studied 70 cases on April 22 and found positive signs in 18 of them. The doctors had submitted a report to the state government on May 6.

Dr Agarwal said 145 cases in the Sunderbans had shown positive results to kala-azar in blood tests. Of these, 65 cases had been subjected to bone marrow tests and the kala-azar protozoal parasite was present in 36 of them. He said 19 of those affected had completed treatment in the 12-bed emergency hospital set up by the trust at Paschim Khejuberia.

The director of the School of Tropical Medicine, Dr N.N. Sen, told **The Telegraph** that 17 kala-azar patients had been admitted to the hospital. Three persons have recently died of the disease in the hospital.

Dr Agarwal said 30 people had died in the dozen villages covered by the trust survey since October, 1985. He said the disease had possibly spread across the border into Bangladesh. The epidemic would go out of control, unless measures were taken soon, he added.

He said the first cases had been detected at Dayapur, Gosaba last year. But there were isolated. Now entire families had been struck down by the disease, he said.

Mr Kanjilal said villagers in the area were panicking. In the last fortnight four kala-azar patients were brought to him from Ranipur village.

Asked about the progress of the malaria eradication programme in the area, Mr Kanjilal said the DDT spraying had been discontinued because of labour disputes and lack of funds.

Dr Agarwal said kala-azar could be easily controlled if DDT was sprayed during the breeding season of the sandfly (Phelebotumus Argentipes) in May-June and September-October. He said the local people had been asking his trust to take over the job at its own cost. The trust was considering this, he added.

Dr Agarwal said all except one case had responded to sodium antimony gluconate injections. He said the blood and marrow tests cost around Rs 300 while treatment costs Rs 60. He said the Centre had agreed to give him 50 ampoules of Pentamidine Isothionate which he would have to collect from Delhi. He said stocks of these medicines were available with the Centre but the blood tests which were mandatory before treatment, were time consuming and expensive. The medicines had side-effects and indiscriminate treatment in Bihar had led to parasite resistance to the drugs.

The disease, which remained dormant during the anti-malaria programme of the fifties and sixties had reappeared among the Oraon tribals in Bihar in the late seventies. These landless labourers brought the disease to West Bengal. There was an outbreak of kala-azar in north 24-Parganas in 1980, in Malda in 1981, in Murshidabad in 1982. It has now spread to the Sunderbans and will soon encompass the whole state unless urgent steps are taken, Dr A.B. Chowdhury of the School of Tropical Medicine said.

Dr Agarwal said the Centre had allocated Rs 10 crores to fight the disease in Bihar, Uttar Pradesh, West Bengal and Madhya Pradesh. He said these funds should be used to spray DDT in the sandfly's breeding areas as soon as possible.

The symptoms of the disease are continuous fever that peaks twice a day, enlarged liver and spleen and severe anaemia. The patient, if left untreated, dies within two years.

/13046
CSO: 5450/0171

## BENGAL FIGHT AGAINST THREE DISEASES INTENSIFIES

Calcutta THE STATESMAN in English 1 Jul 86 p 3

[Text] The West Bengal Government has decided to formulate a plan of its own to combat encephalitis, kalaazar and gastro-enteritis after repeated appeals to the Centre to include these three in the centally-sponsored health programmes were ignored, according to MrRam Narayan Goswami, Minister of State for Health.

A Department of Virology is being opened at the Burdwan Hospital and Medical College to conduct studies on carriers of encephalitis which was till now believed to be carried by pigs. It is suspected that birds and cattle could also spread the virus. Each year Burdwan, Birbhum and Bankura have to contend with this killer disease. The Virology Department in Burdwan will work in tandem with the School of Tropical Medicine and the Pune National Institute of Virology.

Steps to combat kalaazar have been drawn up in consultation with Bihar because this disease is common to contiguous districts in both states, like Malda and West Dinajpur in West Bengal and Purnea and Katihar in Bihar. This year, it has spread to the Sunderbans. West Bengal has drawn up a plan which will be set in motion soon to tackle kalaazar. The plan is being forwarded to Bihar.

Gastro-enteritis, another major headache for the Health Department, is being tackled at a different level. The Sunderbans is one of the areas where the disease recurs every year. At a recent meeting it was decided to have block-level health committees in 14 out of the 19 blocks which fall within the Sunderbans in South 24 Parganas. The committees will be made up of panchayat members and health officials who are expected to educate the villagers to keep drinking water free of contamination. Halogen tablets, bleaching powder and oral rehydration tablets will be stored in gram panchayat offices. The Health Department hopes to go in for health block level committees throughout the State.

Mr Goswami said that the incidence of kalaazar in the Sunderbans was not as high as had been reported in the newspapers, according to a team of doctors who had just come back from the affected areas. A programme had been undertaken to use DDT on the sand fly which is said to cause kalaazar. Only one village is not being sprayed so as to trap the sand flies and conduct some experiments. The team has warned doctors in the area to be careful and not to treat common fever on the assumption that it was kalaazar.

The Minister said that the panchayat authorities of Toofangunj in Cooch Behar had sent word that there was a severe outbreak of malaria in the area. Mr Goswami said this could could be because in the contiguous districts in Bangladesh malaria was rampant. Precautionary measures had been initiated and medicine stocks have been arranged for to tackle malaria in Toofangung.

/9317
CSO: 5450/0177

## REPORTS ON AIDS DEVELOPMENTS IN PUNE, SRINAGAR

Calcutta THE TELEGRAPH in English 28 Jun 86 p

[Text] **Pune, June 27 (PTI):** The Andhra Pradesh director general of health has been alerted by the Sassoon General Hospital here to trace the 24-year-old youth, suspected to have AIDS, who left for Hyderabad Monday after taking discharge against medical advice.

The patient, a post-graduate student of microbiology who had a blood transfusion in the US during his stay there, insisted on his discharge after 10 days at the hospital and was allowed to leave on his "own request," the acting dean of the hospital, Dr R.K. Dalavi, said here today.

Meanwhile the National Institute of Virology director, Dr K.M. Pavri, has criticised the media for publishing misleading reports about blood donations spreading AIDS.

Reports in the newspapers had affected the inflow to blood banks throughout the country, Dr Pavri told UNI.

Blood donation was vital these days, she said, as serious industrial, rail and road accidents were on the increase.

Sources at government and private blood banks in the city and its suburbs said their normal collection of blood had been reduced by half in the past couple of months following fears among the donors that they might be affected by AIDS.

**Our Correspondent adds from Srinagar:** The AIDS screening centre set up in the summer capital on May 1 has so far collected 103 samples to conduct studies to ascertain whether the disease had struck Kashmir.

The blood test centre is yet to ascertain if the people, whose blood samples have been collected, suffer from AIDS. The blood test centre at the Sher-i-Kashmir Institute of Medical Sciences (SKIMS) here, has also collected a number of samples during the past nine months.

But Dr Muhammad Sultan Khuroo, dean of medical faculty and professor-cum-chairman of the department of gastroentrology at the SKIMS, who was reported to have detected the dreaded viral disease in Kashmir during his studies conducted in the far-flung areas of the Valley told The Telegraph that newspaper reports saying that AIDS cases had been traced were incorrect.

However, a reliable source here said the AIDS screening centre headed by Dr Salahuddin, set up by the ICMR on May 1 had collected about 103 samples of suspected AIDS cases. The survey was still on. But out of 75 samples collected by the department of gastroentrology 25 cases had been found positive, most of them homosexuals and prostitutes. There were very few blood transfusion cases, sources added. It is believed that the authorities do not want to divulge details as they fear this might affect the flow of tourist traffic to the valley.

When this correspondent today drew Dr Khuroo's attention towards the claim that out of 75 samples 25 have been positive, he said he had no such information nor could it be true.

/13046
CSO: 5450/0172

INDIA

## DOCTORS DISAGREE ON DIAGNOSIS OF AIDS

Madras THE HINDU in English 29 Jun 86 p 13

[Text] MADRAS, June 28.

A venereologist of the Government Stanley Hospital, Dr. N. Usman, feels that unnecessary panic has been created over AIDS in the country.

"As far as I am concerned, at least in Madras, there is no AIDS or its associated syndrome", he told a symposium on sexual medicine and AIDS.

If they were all real cases of AIDS, he wondered why the team of doctors had not presented its findings before an audience of scientists and medical men. There seemed to be an undue haste in rushing the findings to the press. After reading the press reports he could not come to a definite conclusion that the women, in whom the infection had been detected, were at all exposed to AIDS, he asserted.

**'Full blown' case:** For instance, it was reported that one of the women in the city displayed symptoms of a "full blown AIDS disease". Later the reports said that the woman showed clinical improvement and had in fact gained some weight. "If it is a full blown AIDS case and the woman had shown improvement due to medical aid, the doctors are anxious to know the specific treatment line adopted by the experts. We are not satisfied with the history of the case nor convinced with the clinical features", he said.

Watery diarrhoea, loss of weight and other features could not be the real symptoms of AIDS. "If these were the symptoms, every day Stanley should be accounting for at least 300 cases of AIDS", he said. Quoting international agencies, he said that epidemiological, immunological and clinical evidence seen in the Western countries "is not applicable for the diagnosis of AIDS in tropical countries because of the presence of parasitic infections which per se can cause immunological deficiency and opportunistic infections". Without conclusively proving the immune deficiency by studying the depletion of helper T cells in the affected persons, it would be "unethical and even a crime to brand them as cases of AIDS". There were many specialists who had seen more than 2000 cases of AIDS in the U.K. and the U.S.. "Cannot we invite any one of them here and confirm that what we have here are really cases of AIDS?" he asked.

**'Western Blot':** Dr. Lakshminarayanan, Professor of Microbiology at the Government General Hospital, said it was unfortunate that Dr. Usman should distrust the reports on the detection of AIDS infection in Madras and the findings of the doctors. However, some of the press reports were not correct. "Western Blot is the specific test for AIDS infection" and this test done in the U.S. had established the presence of AIDS antibody in the women at the vigilance home in Madras. And the woman who displayed the symptoms of AIDS disease was not at all improving and had not gained any weight. Actually, she was losing weight. It was actually not to create any panic in the country, that restraint was observed in giving out information. If there was any proved case of AIDS, then "we will certainly present the findings at a scientific meeting. At present our findings are based on laboratory investigations", he said.

Prof. Syed Ameen Ahammed spoke on clinico epidemiological aspects of AIDS. Prof. M. P. Prabakar hoped that there would be more information in the future to understand the pattern of the incidence of AIDS in the country.

Earlier, inaugurating the symposium organised by the sex counselling clinic of the Department of Medicine, Government Stanley Hospital, Dr. R. C. Murugesan, Joint Director of Medical Education, said sex counselling clinics had a great role to play in bringing relief to the affected people. There should be a multidisciplinary approach to the sex problems of the people.

/13046
CSO: 5450/0173

# DANGERS OF, FIGHT AGAINST AIDS IN INDIA REVIEWED

## Fear 'Exaggerated'

Madras THE HINDU in English 1 Jul 86 p 17

[Excerpt]

Infection by the AIDS virus, the Human Immunodeficiency Virus (HIV) needs to be clearly distinguished from the full-blown AIDS disease, which is known to be fatal and the condition of AIDS-Related Complex (ARC), which one of the 15 cases of infection detected is believed to be displaying and which may respond to therapy. Epidemiologically, only about 10 per cent of the people infected are known to develop the AIDS disease. But infected people are potential transmitters of the virus—'asymptotic carriers'—and the infection can spread widely. Hence the need for an AIDS-surveillance system at the national level to screen the various high risk groups for AIDS so that the infection may be controlled. In accordance with the recommendations of a task force set up by the Indian Council of Medical Research (ICMR), the Ministry of Health has set up a network of institutions for AIDS-surveillance and several steps have already been taken.

### Imported phobia

But this appears to be an over-reactive response to a largely exaggerated public reaction generated solely by the AIDS-scare in the West. A large homosexual population and a permissive society possibly make the fear there justifiable. But here, given the conservative sexual mores and practices, the likelihood of the problem acquiring similar dimensions is remote. Preventive measures are certainly essential, but what is not understandable is why AIDS seems to have gained precedence over the more urgent and vital health problems confronting millions in the country.

On the other hand, the elaborate surveillance network put down on paper to screen for AIDS infection appears to have also exposed the gross inadequacy of the health care machinery. The AIDS-infection case which resulted in a death had not even been picked up by the surveillance system in its normal course of operation. The illness was diagnosed to be AIDS only two weeks before the patient died, although he is believed to have developed AIDS symptoms as far back as in 1983 which the hospital doctors never recognised. It was a chance occurrence that the serum sample was sent to the National Institute of Virology (NIV), Pune, one of the main centres in the AIDS-surveillance network. This only points to the lack of dissemination of information on AIDS to various hospitals by the authorities concerned.

What was even more surprising was the response to this case of an official of the AIDS monitoring cell of the Ministry of Health. The official is reported to have said that he came to know of the case only through the newspapers and moreover that it was a State health subject.

### Absence of virus

Recently a routine circular was sent by the Chief Drug Controller to all hospitals, clinics and blood banks saying that professional blood donors should be certified free of the AIDS virus before being allowed to donate blood. Clearly, the Chief Drug Controller is not aware of the fact that there are techniques available only to detect AIDS antibodies and not the virus. The presence of antibodies need not necessarily imply presence of the virus—the antibodies alone may have been transmitted through various means—and absence of antibodies does not guarantee absence of the virus, because the virus can exhibit latency.

These really underline the paucity of the national health care system, which is mostly being run by a bureaucratic set up with the utmost indifference. There are also hundreds of health care units which do not fall directly under Governmental supervision, and enforcing regulations and procedures of screening, testing and handling laid down by the ICMR or the Ministry for cases of AIDS infection could be severely problematic—the very same problems that have resulted in the failure to contain other infectious diseases in India, means for the prevention of which have been known for years.

Even the identification of risk groups and epidemiological characteristics of AIDS in India—which is the main objective of the surveillance network at present—already appears to be a difficult task. To date, only CMC, Vellore, and NIV, Pune, have been conducting active screening tests. The sera identified to be positive for AIDS infection by both these centres have been almost wholly from female prostitutes—13 of the 14 cases in Tamil Nadu and one in Bombay.

The problem of mandatory screening of risk groups for AIDS was highlighted recently by Dr. Khorshed M. Pavri, Director, NIV, at a national seminar on AIDS. According to her, inspite of the general belief that intravenous drug users exist in fair numbers in the country, even hospitals and social welfare groups could not help her group locate and screen them. She also pointed out that cooperation from the Inspector-General of Prisons and the Director-General of Social Welfare to cover correctional centres like jails and remand homes—the homosexual population is expected in these—for antibody screening was not easily forthcoming. And despite great effort to identify them, she said, homosexuals were in conspicuously small numbers. Sodomy being a cognisable offence would be an additional factor preventing male homosexuals/bisexuals and eunuchs from offering themselves for mandatory screening.

The efforts of the Pune Institute in screening of sera have so far proved somewhat successful only in prostitution areas and STD clinics. In Bombay and Pune together, 115 prostitutes have so far been screened through STD clinics located in the red light areas. Only one has been found to carry AIDS antibodies and confirmed to have the infection. But even this case could not be followed up as the individual had disappeared. "How do you enforce registration and certification of prostitutes so they could be monitored regularly?" asks Dr. Pavri. Recently, it was reported that the Maharashtra State health authorities are considering the licensing of prostitutes. Clearly, licensing alone cannot solve the problem. Periodical medical checkups should be made mandatory.

In a camp arranged by the NIV at Baina in the port city of Vasco in Goa, sera were tested from prostitutes attending the STD clinic there. It is interesting to note that, in spite of the large foreign tourist population, no AIDS-infection was detected there.

CMC, Vellore, on the other hand, has been more successful in its efforts. The centre has till now managed to screen 1434 sera samples from all over Tamil Nadu, including those from 412 pristitutes, 170 highly heterosexual tribals, 35 homosexuals, 315 blood transfusion cases, promiscuous heterosexuals and professional blood donors. Of these, 34 have shown positive reactivity by the Enzyme-Linked Immunosorbent Assay (ELISA) test and of these 13 prostitutes have been confirmed by either the Western Blot test or the Karpas test.

Maharashtra and Tamil Nadu, where AIDS-infection cases have been detected, are the States with the highest incidence of STD. According to a recent survey of the Central Bureau of Health Intelligence, the number of STD cases in Tamil Nadu is 1,79,554 (of which syphilis accounts for 12,924) and in Mahasashtra, it is 3,88,465 (with 58,825 cases of syphilis), from an all-India total of 9,19,085 (of which syphilis accounts for 97,738). In the U.S. and Europe, there is quite a correlation between STD and AIDS-infection and this correlation may also show up in India. The NIV Pune, has so far tested 143 males attending STD clinics in Bombay but has not detected any positive case of AIDS-infection. This is one of the leads which the surveillance network is likely to follow.

But according to Prof. V. Ramalingaswami of the ICMR, though STD is widely prevalent, its prevention and control have been largely neglected. "This opportunity of AIDS should be used to monitor and prevent STD in general" he says.

Blood being an important route for transmission of the AIDS-virus, though in the U.S., only two per cent of AIDS patients constitute this high-risk group—mandatory measures to screen blood in blood banks will be required. Among the blood transfusion cases and professional donors, including those positive for hepatitis-B markers (considered a risk group), screened so far by the CMC, Vellore, and NIV, Pune, no AIDS-antibodies have been detected.

Given the prevalent condition of blood banking in the country, mandatory screening of blood samples for AIDS-antibodies would appear meaningless. There are about 307 registered blood banks (295 attached to hospitals and 12 belonging to either the Red Cross or the private trusts) and an almost equal number of unregistered small private ones. Screening for hepatitis-B surface antigen has been made mandatory since 1976 and so has been the VDRL test for syphilis. But only about 52 are known to carry out screening tests for hepatitis-B antigen using techniques of different sensitivity. The number of banks carrying out the VDRL test is not even known—"hardly any", says Prof. Ramalingaswamy.

The carrier rate for hepatitis-B antigen in professional donors varies from five to eight per cent depending on the State, and about one per cent in voluntary donors. The STD carrier rate among professional blood donors in Tamil Nadu, for example is eight per cent according to Dr. M. L. Gupta, Director, Red Cross Blood Banks, the carrier rate of STD in voluntary donors (based on Red Cross observations) would be less than one per cent. "It is the professional donors who are majority carriers of both hepatitis-B and syphilis," Dr. Gupta points out. According to ICMR data, there are many States where hospitals (with more than 500 beds) rely largely on professional donors—the percentage being as high as 100 in some States—which means that there are hospitals which do not have blood banking facilities at all.

"The organisms for STD are destroyed if you keep the blood at 4°C for 72 hours," says Dr. Gupta. "But hardly any blood bank has this refrigeration facility and moreover, blood is collected in such emergency manner that no tests can be performed." Dr. Gupta's reaction to the proposed introduction of mandatory screening for AIDS-antibodies is therefore predictable. "Let the blood banks have available some of the basic things like the chemical ACD, sterile and disposable bottles, and needles. There is no quality assurance and quality checks on the sera in various blood banks, and before testing for AIDS, let ELISA kits for hepatitis-B be made available cheaply," says Dr. Gupta.

Therefore, even if some kind of stipulation be laid that only professional donors will be screened for AIDS-antibodies, the problem is far from being simple considering the inadequacies of the blood banks. The problem with regard to blood products also seems equally complicated.

Thirtytwo hemophiliacs, who used indigenous blood products were tested and all were found to be negative for AIDS infection. According to Dr. Pavri, the use of imported Factor VIII or IX concentrates for blood coagulation and also different immunoglobulins, particularly the one for hepatitis-B, is rare in India. The users of such blood products may therefore not pose a public health risk. However, they need to be monitored periodically for any clinical or serological evidence implicating AIDS. Similarly, the blood products being imported also need to be checked and certified free of AIDS-antibodies. But this is not an easy task at all and the infrastructural resources required would be enormous.

The emergence of AIDS in India, some medical experts feel, could provide an opportunity to shake up the blood banking system, and AIDS-surveillance , it is felt, will also reveal the shortcomings in the infrastructure of the health system vis-a-vis STD, venereal diseases and hepatitis-B, which are widely prevalent. A committee has been constituted to evolve a joint strategy for screening blood and blood products for the AIDS virus, the hepatitis-B antigen and syphilis. The first task of this committee is to advise the health authorities on the cheapest hepatitis-B test kit which can be made available all over the country. It is an irony that this basic need of all blood banks had to be realised in this unbelievably convoluted way.

Recently, after the arrival of imported AIDS test kits, some sections complained that the kits had not been supplied to them. But never in the past was there even a murmur of protest about the lack of kits for hepatitis, malaria or filariasis. National surveillance networks are more essential for diseases like filariasis, whooping cough (which kills 1.3 million children every year), encephalitic rabies, polio, etc. A cure for TB exists, but despite the national machinery constituted years ago, the disease is a major killer in the country. A vaccine for polio exists but the health authorities are still to eradicate the disease.

How many medical workers are prepared to collect blood samples and test the population from filariasis endemic areas? There, however, seems to be great interest in joining the bandwagon to test blood samples for AIDS. Filariasis does not, unfortunately, attract attention, whereas AIDS does.

A pertinent observation was recently made by Dr. Abraham Karpas who had gone around the red light areas of Bombay to collect blood samples from prostitutes describing the conditions of hygiene under which prostitution takes place as "indescribably appalling." He pointed out that the phenomenon of only women prostitutes carrying AIDS antibodies and indicating a heterosexual route may be a reflection of this. "There are women who have three or four customers every night and there are no facilities for dousing or washing. And inflamation of the vagina could be the reason for infection being transmitted from bisexual males whom you have not tracked."

# Reference, Surveillance Centers

Madras THE HINDU in English 1 Jul 86 p 17

[Text]

A TASK force on AIDS, constituted by the ICMR in October 1985, recommended the establishment of a surveillance machinery that would ensure investigation of high-risk groups (see chart).

Two categories of surveillance units have been set up. AIDS reference centres have been established at the following institutions:

I) National Institute of Virology, Pune.

II) Centre for Advanced Research on Virology, Christian Medical College, Vellore.

III) All India Institute of Medical Sciences, New Delhi.

IV) National Institute of Communicable Diseases, Delhi.

In addition, AIDS surveillance centres are being set up in each State. Centres have already been established at the following institutions:

I) Department of Microbiology, Madras Medical College, Madras.

II) National Institute of Cholera and Enteric Diseases, Calcutta.

III) Rajendra Memorial Research Institute for Medical Sciences, Patna.

IV) Department of Immunology, Sher-E-Kashmir Institute of Medical Sciences, Srinagar.

V) Regional Medical Research Centre, Bhubaneshwar.

More institutions have been identified for establishment of other surveillance centres (See table for the proposed network).

The task force has recommended the following measures:

1) Alerting clinicians in medical colleges to be on the look-out for AIDS infection in high-risk groups and to collect sera from such patients for tests for HIV in AIDS reference/surveillance centres.

2) Survey of HIV-antibodies in high-risk groups such as inmates of jails/remand homes, male and female prostitutes, eunuchs etc.

3) Close watch on imported blood products to ensure that only those batches which are certified to be free from HIV are permitted to be imported to India.

4) Dissemination of information to the general public to create awareness in the population through pamphlets, circulars and audio-visual programmes etc.

The reference centres/surveillance centres will undertake ELISA test on sera from suspected patients and also from high risk subjects sent to them by various clinicians. Sera yielding positive ELISA result will be retested by ELISA. If the test is repeatedly sero-positive, the test will be reconfirmed by ne of the reference centres. Sera reportedly positive by ELISA with at least one positive result in a reference centre will be subject to a Western Blot test.

The reference centres are screening sera from known risk groups using ELISA kits from Electro Nucleonics Inc., Vironostika, Abbott laboratories, and Litton Bionetics. Very recently, test kits for 5,000 tests, of Wellcome Diagnostics Ltd., have been procured by the ICMR for distribution to several of the surveillance centres.

The ELISA tests are quite sensitive but not very specific. These tests therefore, are considered very useful for screening large numbers but are known to give about 20 per cent false positive results. The cost per test varies from kit to kit but is in the range of $1.2 — $5 (Rs. 1.50 — 6) if the kits are exempted from duty. Of course, this costing does not take into account the high cost about Rs. 50,000 — Rs. 1 lakh of the ELISA reader needed in each of the centres to identify positive or negative response of each test.

Till now, the confirmative Western Blot test has been conducted by the National Institute of Health, U.S. The test involves identification of glycoprotein content — GP 24 and GP 41 — specific to HIV for unequivocal confirmation of the presence of AIDS virus. The cost per WB test is about $160 (Rs. 2,000).

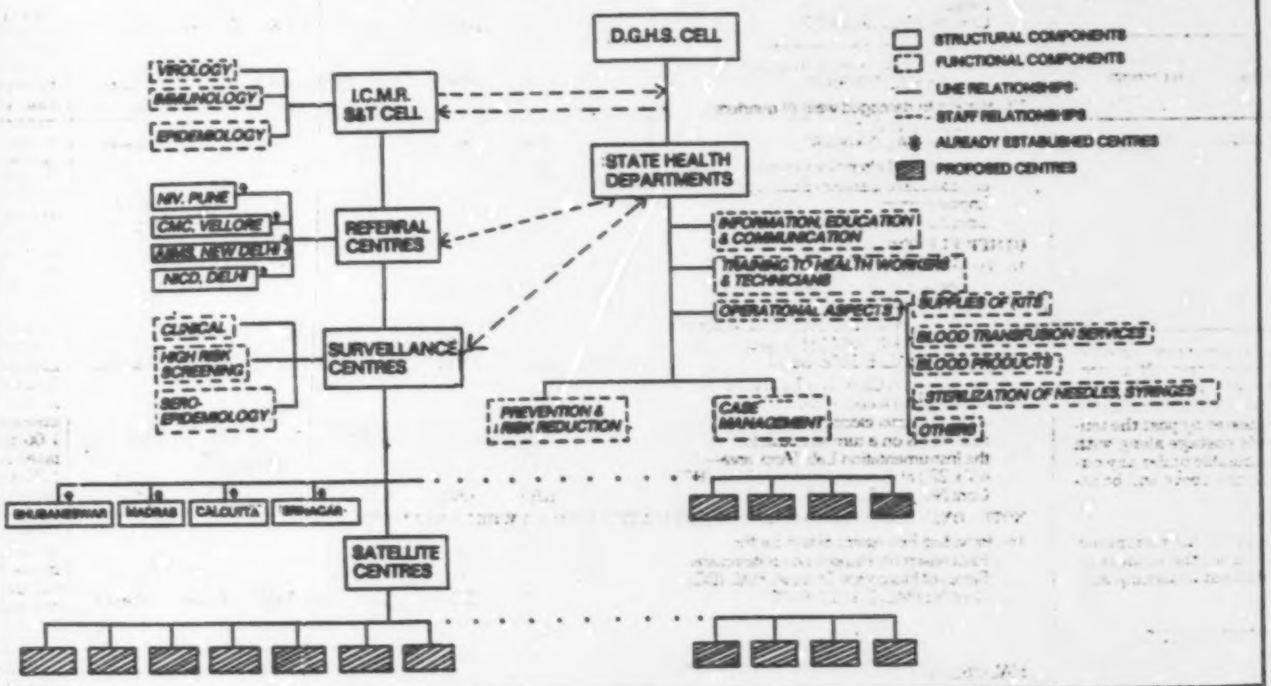
A simpler and cheaper test (expected to be under a dollar per test), developed recently by Dr. Abraham Karpas of Cambridge University, is likely to be tried by various centres. According to Dr. Karpas, since his test is based on T-cell line with immobilised virus in it, no antigen of the virus is lost, and therefore the test is unlikely to give false positive results.

In a limited sample comparison test conducted by CMC, Vellore, however, the Karpas'' test showed only 50 per cent compatibility with 'Gold Standard' WB test. Dr George babu, who carried out the tests, says that comparison with such a small sample is not yet sufficient to prove the sensitivity and specificity of Karpas test.

ICMR intends to negotiate with Dr. Karpas for the supply of the T-cell line (which he has patented) so that the culture for production of the cell line on a large scale could be establsihed in India and test kits prepared. Dr. Karpas, however, has commercial interests and hopes to give his cell line to private firms and will supply only the manufactured kits to the ICMR.

Rights for the HIV-antigen (used in the ELISA tests) apparently rest with the U.S. Government and not with any multinational. The ICMR hopes to obtain this antigun from the U.S. Government free of charge and produce kits indigenously.

# NATIONAL AIDS CONTROL STRATEGY


D.G.H.S. CELL
STRUCTURAL COMPONENTS
FUNCTIONAL COMPONENTS
LINE RELATIONSHIPS
STAFF RELATIONSHIPS
ALREADY ESTABLISHED CENTRES
PROPOSED CENTRES
VIROLOGY
IMMUNOLOGY
EPIDEMIOLOGY
I.C.M.R. S&T CELL
STATE HEALTH DEPARTMENTS
NIV, PUNE
CMC, VELLORE
AIIMS, NEW DELHI
NICD, DELHI
REFERRAL CENTRES
INFORMATION, EDUCATION & COMMUNICATION
TRAINING TO HEALTH WORKERS & TECHNICIANS
OPERATIONAL ASPECTS
SUPPLIES OF KITS
BLOOD TRANSFUSION SERVICES
BLOOD PRODUCTS
STERILIZATION OF NEEDLES, SYRINGES
OTHERS
CLINICAL
HIGH RISK SCREENING
SERO-EPIDEMIOLOGY
SURVEILLANCE CENTRES
PREVENTION & RISK REDUCTION
CASE MANAGEMENT
BHUBANESWAR
MADRAS
CALCUTTA
SRINAGAR
SATELLITE CENTRES

### Network of Reference/Surveillance Centres for AIDS

| City | Institution | Territory |
|---|---|---|
| Chandigarh | Postgraduate Institute of Medical Education and Research | Punjab, Haryana and |
| Srinagar | Sher-I-Kashmir Institute of Medical Sciences | Jammu and Kashmir |
| Delhi | Departments of Clinical Immunology* and Microbiology*,<br>All India Institute of Medical Sciences<br>National Institute of Communicable Diseases | Delhi |
| Simla | Medical College | Himachal Pradesh |
| Lucknow | KG Medical College | Uttar Pradesh |
| Patna | Rajendra Memorial Research Institute of Medical Sciences* | Bihar |
| Ahmedabad | BJ Medical College | Gujarat |
| Calcutta | National Instituteof Cholera & Enteric Diseases*<br>School of Tropical Medicine | West Bengal, Sikkim, Andaman & Nicobar islands |
| Gauhati | Medical College | Assam |
| Imphal | Regional Medical College | Manipur,Tirupura,Meghalaya NagalandArunachalPradesh Mizoram |
| Bhubaneswar | Regional Medical Centre* | |
| Cuttack | Medical College | Orrisa |
| Jabalpur | Regional Medical Research Centre | |
| Bhopal | Gandhi Medical College | Madhya Pradesh |
| Bombay | Seth GS Medical College | |
| Pune | National Institute of Virology* | Maharashtra |
| Nagpur | Government Medical College | |
| Panaji | Goa Medical College | Goa, Daman, Diu, Dadra Nagar Haveli |
| Trivandrum | Medical College | Kerala, Laccadives |
| Madras | Madras Medical College* | |
| Vellore | Christian Medical College* | Tamil Nadu |
| Madurai | Madurai Medical College | |
| Pondicherry | Jawaharlal Instiute of Postgraduate Medical Education and Research | Pondicherry, Mahe Karaikal |
| Hyderabad | Osmania Medical College | |
| Vishakhapatnam | Andhra Medical College | Andhra Pradesh |
| Bangalore | Bangalore Medical College | Karnataka |
| Belgaum | Medical College | |
| Jaipur | SMS Medical College | Rajasthan |

**Centres already established*

/9317
CSO: 5450/0178

## BRIEFS

ARUNACHAL DYSENTERY DEATHS--Itanagar, July 7 (PTI)--Altogether 37 persons, including children, have died of a water-borne dysentery-like disease in the East Kameng district of Arunachal Pradesh during the last two months, according to Mrs Nyare Welli, MLA of the area. Mrs Welli said here yesterday that many affected people had been removed to the Tezpur civil hospital. She has sought immediate medical relief to meet the situation. [Text] [Calcutta THE TELEGRAPH in English 8 Jul 86 p 5] /9317

MALARIA IN COOCH BEHAR--Calcutta, June 30--A malaria epidemic has broken out at Toofangunge in Cooch Behar district, according to the state minister of health, Mr Ram Narayan Goswami. Mr Goswami told newsmen at Writers' Buildings today that radiograms had been sent to the district magistrate and district chief medical officer asking them to take precautionary measures. "All possible resources, including doctors and medicines, are being mobilised to deal with the problem," Mr Goswami said. He added that the director of malaria, Dr Nirmal Chowdhury, would be leaving for Cooch Behar on Thursday to make an on-the-spot study. [Text] [Calcutta THE TELEGRAPH in English 1 Jul 86 p 4] /9317

CSO: 5450/0180

## BRIEFS

CHOLERA OUTBREAK IN NORTH SUMATRA--Jakarta, 28 Jul (AFP)--A cholera outbreak in north Sumatra has left 48 people dead and at least another 837 seriously ill, a newspaper reported Monday. The daily KOMPAS said the disease struck the North Tapanuli and Langkat Districts last week. The daily quoted B. Sinaga, head of the prevention of infectious diseases unit in North Tapanuli, as saying that clinics were nearly out of drugs. He said that local health centers had run out of beds and many of the sick had to be treated as outpatients. [Text] [Hong Kong AFP in English 0318 GMT 28 Jul 86 BK] /9274

CSO: 5400/4398

## WARNING ISSUED ON MASSIVE DENGUE OUTBREAK

Kuala Lumpur NEW STRAITS TIMES in English 7 Jul 86 p 3

[Article by Robert Goh]

[Text] **KUALA LUMPUR,** Sun. — The people have been warned again — there would be a massive outbreak of dengue fever/dengue haemorrhagic fever this month or next month unless they rouse themselves from their complacency and destroy all breeding grounds of the carrier Aedes Aegypti mosquito.

Prof S.K. Lam, director of the World Health Organisation's Collaborating Centre for Arbovirus Reference and Research, warned that the coming outbreak could be worse than the DF/DHF epidemic in 1982.

Prof Lam, who is also head of the Department of Medical Microbiology at the University of Malaya's Medical Faculty, added: "I'll stick out my neck and say Malaysia cannot escape a bigger attack soon unless preventive action is taken."

He said the peak year for DF and DHF was 1982, when there were 3,126 cases with 36 deaths.

Studies, he said, had shown that major outbreaks have a four-year-cycle, and if-that was anything to go by, there would be another major outbreak this month or in August.

"The years 1983 to 1985 were fairly quiet, and we feel this period could be the lull before the storm," said Prof Lam.

He stressed that public involvement was necessary to eradicate mosquito breeding sites.

Meanwhile, Dr Jit Singh of the Health Ministry's Vector-borne Diseases Control Programme, said that the number of DF/DHF cases throughout the country so far had risen to 788, with three new cases reported as of noon yesterday. The number of deaths so far is seven. There were 367 cases reported last year and 11 deaths.

He advised those who suspect they have contracted the disease to seek immediate medical treatment.

/12828
CSO: 5400/4400

## DENGUE CASES REPORTED INCREASING IN PENANG

Penang THE STAR in English 7 Jul 86 p 6

[Text] PENANG, Sun. — The number of dengue and dengue haemorrhagic fever cases has been increasing monthly despite the preventive measures taken by health authorities, State Director of Medical and Health Services Dr Lim Keow Kheng said today.

In the past six months, 132 dengue cases had been reported in the State compared with 27 for the same period last year, Dr Lim said when launching a Statewide anti-dengue campaign at the Pulau Tikus market.

She said aedes larvae were found breeding in 3,251 of the 135,173 houses checked.

So far, 219 houseowners had been fined, she said, adding that persistent offenders could be charged under the Destruction of Disease-Bearing Insects Act 1975.

The month-long campaign is jointly organised by the Lions Club of Georgetown and the Lioness Club Penang together with the health division of the Municipal Council. — Bernama.

/12828
CSO: 5400/4400

## HEALTH MINISTRY REPORTS FOUR AIDS CARRIERS

Penang THE STAR in English 4 Jul 86 p 3

[Text]

KUALA LUMPUR, Thurs. — The Health Ministry announced today that four more people have been confirmed to be AIDS carriers.

The Minister, Datuk Mak Hon Kam, said that two of the men were in Pudu Prison while the other two had been released.

This brings the total number of AIDS carriers to five. The first case, announced late last year, was a former petrol pump attendant residing in Johore. He is still warded at the Johore Baru Sultan Aminah Hospital for tuberculosis.

The man had also gone to prison for a drug offence.

Datuk Mak said one of the two in Pudu Prison had denied that he was a homosexual or an intravenous drug user. He said the Ministry was investigating how he could have got the virus.

(The virus is found in body fluids particularly in blood and semen and infection can be transmitted sexually, especially among homosexuals, through transfusions of tainted blood, or the sharing of syringes by intravenous drug users.

The high-risk groups for AIDS are therefore homosexuals, intravenous drug users and haemophiliacs.

The AIDS virus cripples the body's immune system leaving it defenceless against diseases which ultimately kill. There is no known vaccine or cure).

The other AIDS carrier in jail, a thirty-year-old carpenter from the Federal Territory, is an intravenous drug user and the only one who has admitted to bisexual activities, Datuk Mak said.

The other carriers, both labourers, are living at home in Gombak, Selangor and Tampoi, Johore. The latter is married, but his family has been found to be clear of AIDS.

Datuk Mak said that the Ministry was investigating the carriers' contacts. The carriers have been given medical counselling as well as advice on what to do to prevent the spread of the disease.

He said that out of the 7,729 blood samples screened by the Ministry, 99 screened positive and were sent to Australia for confirmatory tests.

"Fifty-nine came back negative, five were discovered positive and we are still awaiting the results of 35 blood samples," he said.

/12828
CSO: 5400/4400

## BRIEFS

**DENGUE FEVER CASES**--Another six cases of dengue fever were reported on 15 July, bringing the nationwide figure to 890 this week. A spokesman of the vector-borne disease control division told BERNAMA News Agency on 16 July that the new cases were reported from Perak, Pahang, and the Federal Territory. Seven death casualties have thus far been reported this year. [Summary] [Kuala Lumpur Domestic Service in Malay 1230 GMT 16 Jul 86 SK]

/9716
CSO: 5400/4394

## BRIEFS

BEIRA ANTI-MALARIA CAMPAIGN-More than 16,000 dwellings were sprayed this year in Beira during an antimalaria campaign undertaken by the Sofala Provincial Health Directorate in conjunction with the Soviet Union. The spraying of the interior of the homes was done in six neighborhoods of Beira. /Summary/ /Maputo NOTICIAS in Portuguese 1 Jul 86 p 2/ 12228

CSO: 5400/160

## 981 CASES OF MALARIA IN MANAGUA THROUGH MAY

Managua BARRICADA in Spanish 24 Jun 86 p 6

[Text] From January to May 1986, there have been 981 confirmed cases of malaria in Region III, according to official reports provided by the Ministry of Health.

German Gaitan, head of ACEM [Area of Malaria Control and Eradication] in Managua, maintained yesterday that 131 of the 981 cases are "imported"--that is, brought in by soldiers or people who emigrate from other regions and war zones in the country. Matagalpa is highest with 44 "imported" cases.

Gaitan said that from January to May 1985, only 339 cases of malaria were recorded in Region III.

### Why Did It Increase?

He said that the reasons are that last year they did not have the insecticide Caotrin to kill the anopheles mosquitoes, most of the ACEM personnel were mobilized to fight dengue fever, and there were administrative problems.

Gaitan stated: "The recent outbreaks in Tipitapa and San Rafael del Sur are the result of the above. Therefore, the number of cases of malaria increased." He emphasized, however, that malaria has decreased in Region III compared to other years.

### 440 Cases in Urban Area, 55 Districts

Villa Carlos Fonseca, Tipitapa, and San Rafael del Sur are still highest in incidence of malaria. One of the least affected municipalities is Ticuantepe, according to Gaitan's report.

Based on current rates of incidence, an average of 0.97 people out of every 1,000 persons are affected.

Gaitan said that last year it remained below 1 per 1,000 which means that there were effective controls. This year it might be more than 1 per 1,000 inhabitants in Managua.

The Managua districts most affected include: Ciudad Sandino, Monsenor Lezcano, Villa Jose Benito Escobar, Las Torres, Altagracia, Villa Pedro Joaquin Chamorro, San Judas, and Sierra Maestra.

There have been 13 recorded cases in San Judas, 9 of which were "imported" from northern Nicaragua.

Two Neighborhoods Endanger Collective Health

Gaitan said that last year fumigation was done only at what are called "source controls." Now that we have the insecticide Caotrin, the objective is to have massive fumigation "to control the population of anopheles mosquitoes."

There were residents who would not open their doors to the workers taking blood samples, finding out where the mosquitoes are, and proceeding to fumigate.

Gaitan reported that most of the residents of Villa Julio Buitrago (formerly Las Mercedes) and Unidad de Propositos refused to allow ACEM personnel to enter. They alleged: "We are not sick."

He added that the Sandinist Defense Committees and their Zone Nine have not been aggressive enough about solving this problem "which endangers the collective health of other neighborhoods."

Gaitan stated that the neighborhoods mentioned are on the edge of Villa Jose Benito Escobar, one of the Managua districts most affected by malaria.

Gaitan asked for more cooperation with the ACEM workers to fight this disease that continues to hurt the people of Nicaragua.

7717
CSO: 5400/2072

## BRIEFS

**AIDS ADVISORY COMMITTEE FORMED**--Health Minister, Olikoye Ransome-Kuti, has confirmed that the Acquired Immune Deficiency Syndrome (AIDS) virus might be active in the country. He made this known while speaking at the inauguration ceremony of an 11-member experts advisory body on AIDS set up by his ministry. According to the minister, "Although no case has been reported in Nigeria, which is the most populous country in Africa, there appears to be some evidence from blood tests that the virus might be active in the country". "It is as a result of this, that the advisory committee has been charged among other tasks, to establish divisional surveillance network capable of monitoring the activities of AIDS virus in the country', he said. The committee which is a standing one, will collect analysis dissenunate data and information; identify existing centres for diagnosis and research, and prepare contingency plans and strategies to prevent the introduction and spread of the disease in Nigeria. [Text] [Enugu DAILY STAR in English 26 Jul 86 p 16] /9274

**MEASLES, MENINGITIS CASES**--About 15 children died of measles and cerebrospinal-meningitis, (CSM), in Gombi local government area of Gongola State between January and May. The principal medical officer-in-charge of the Garkida General Hospital, Dr. Mohammed Halilu said, about 600 cases were recorded in the area, during the period. According to him, 150 out of the total cases were that of measles while the remaining 450 cases were CSM and other contagious diseases. Dr Mohammed appealed to parents and guardians to report any suspicious disease attack to the nearest hospital, health centre or clinic for proper medical attention instead of self-medication. He commended mothers and guardians for the support and cooperation towards health officials for the success of the Expanded Programme on Immunization (EPI) and Oral Rehydration Theraphy (ORT) in the area. The PMO assured that, enough consignments of most of the essential drugs were now available in the hospital and urged the people in the area to make the best use of the facilities. He opined that, if the people would embark upon preventive measures the sporadic outbreaks of contagious diseases would be minimised. [Text] [Kaduna NEW NIGERIAN in English 26 Jun 86 p 10] /9274

**TSETSE FLY RESEARCH**--About 80 per cent of Nigeria's land is infested by tsetse flies which transmit sleeping sickness. The Minister of Science and Technology, Professor Emmanuel Emovon, disclosed this in Lagos during a press briefing. He however said the Nigerian Institute for Trypanosomiasis Research (NITR), in collaboration with the International Atomic Energy Agency (IAEA) and the Federal Department of Pest Control Services, had intensified research efforts directed at combating the meance of the various species of tsetse fly. The minister said it had been discovered that the sterile insect technique could be used to eliminate a large number of tsetse flies in infected areas. Another method, he said, was using of invitro cultivation to develop and produce vaccines against the disease. [Text] [Kano SUNDAY TRIUMPH in English 22 Jun 86 p 5] /9274

TB CASES IN LAGOS--Tuberculosis and dental cases are on the increase in Lagos State according to the statistics just released in Lagos. Making this known yesterday the "Statistical Indicators" of the state Ministry of Finance says 10,046 new cases were treated by the dental departments of the state general hospitals and health centres, while 4,630 new cases of tuberculosis were attended to by similar institutions in April. In March it says, the figure for dental cases was 7,994 while 3,519 cases of tuberculosis were recorded and treated in the state the same month. [Text] [Lagos DAILY TIMES in English 8 Jul 86 p 13] /9274

CSO: 5400/104

## PHYSICIANS WARN 20,000 AIDS CASES BY 1988

Oslo ARBEIDERBLADET in Norwegian 27 Jun 86 p 8

[Article by Lone Hansen]

[Text] "It is reasonable to estimate that the number of persons now infected with the AIDS virus in Norway has reached 2,500. According to predictions, which have held true so far, the number will rise to 20,000 in just 2 years. Steps must be taken quickly or the situation will end in a catastrophe," Georg Petersen, chief physician of the Oslo Board of Health, told ARBEIDERBLADET.

Doctor Petersen pointed specifically to groups of young drug abusers. "Every week we find drug users who are infected with HTLV-3. The tragedy is that these infected people must return to the streets and they continue using drugs and practicing prostitution. This happens even though they want treatment and the number of persons who clearly indicate this is rising steadily," Petersen said.

### Urgent

Dr Georg Petersen stressed that it was extremely urgent that planned measures be implemented and that the Norwegian authorities do their utmost before it is too late. According to predictions, during the first half of 1988 Norway will have 200 cases of AIDS and 20,000 persons infected. "Regardless of what we do, we will see a dramatic increase in infections during the coming years, while the effects of what we do now will become apparent only later. But it is now that we must act," Petersen said.

### AIDS In Nordic Countries

The AIDS situation throughout the Nordic countries was discussed yesterday at a meeting of the social affairs ministers in Reykjavik. A special working group will monitor the situation and be responsible for the exchange of information and experience. The group will make proposals regarding research, projects, and actions involving certain high-risk groups. The total number of AIDS victims in the Nordic countries in May of this year was 174. Of this number, 106 have died. The number of those infected by the AIDS virus is estimated at between 11 and 20 thousand.

## About Time

"It is about time the politicians began to take the matter seriously. Now they seem openly willing to do something. It remains to be seen whether or not this will result in sufficient funding. In the United States it has been estimated that the cost of treating an AIDS patient is about the same as the cost of a heart transplant. Consequently, from a purely economic standpoint, it would be most beneficial to begin investing our resources here and now," Dr Georg Petersen said.

## In Oslo

"The infection is spreading like wildfire in the drug environment of Oslo. The Social Welfare Department is working overtime to implement countermeasures. The first step in this multistage plan is to create 50 to 60 new beds for treatment. In general, the main problem is to increase our capacity for treatment," said psychologist Jan Lanesskog, who is employed by the coordinating group for health services in Oslo. "In all probability, we will need the capacity to treat more patients and we will have to expand further the infectious disease ward at Ulleval Hospital," he said.

It is estimated that there are 300 to 400 drug abusers in Oslo who are already infected and the figure for the entire county is estimated at 600.

According to predictions, the number of infected will double within a period of 8 months, so that there will be over 5,000 infected by next summer.

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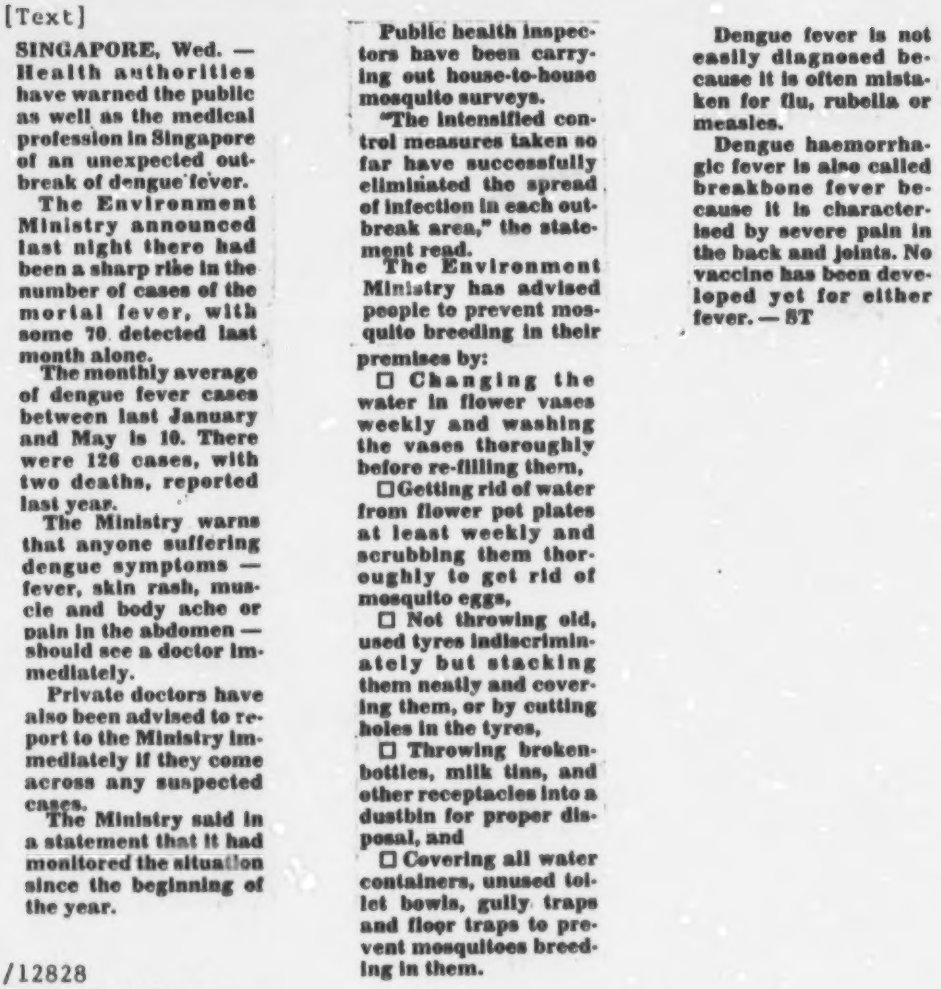
CSO: 5400/2544

## HEALTH AUTHORITIES ISSUE DENGUE ALERT

Kuala Lumpur NEW STRAITS TIMES in English 3 Jul 86 p 10

[Text]



**SINGAPORE, Wed.** — Health authorities have warned the public as well as the medical profession in Singapore of an unexpected outbreak of dengue fever.

The Environment Ministry announced last night there had been a sharp rise in the number of cases of the mortal fever, with some 70 detected last month alone.

The monthly average of dengue fever cases between last January and May is 10. There were 126 cases, with two deaths, reported last year.

The Ministry warns that anyone suffering dengue symptoms — fever, skin rash, muscle and body ache or pain in the abdomen — should see a doctor immediately.

Private doctors have also been advised to report to the Ministry immediately if they come across any suspected cases.

The Ministry said in a statement that it had monitored the situation since the beginning of the year.

Public health inspectors have been carrying out house-to-house mosquito surveys.

"The intensified control measures taken so far have successfully eliminated the spread of infection in each outbreak area," the statement read.

The Environment Ministry has advised people to prevent mosquito breeding in their premises by:

☐ Changing the water in flower vases weekly and washing the vases thoroughly before re-filling them,

☐ Getting rid of water from flower pot plates at least weekly and scrubbing them thoroughly to get rid of mosquito eggs,

☐ Not throwing old, used tyres indiscriminately but stacking them neatly and covering them, or by cutting holes in the tyres,

☐ Throwing broken bottles, milk tins, and other receptacles into a dustbin for proper disposal, and

☐ Covering all water containers, unused toilet bowls, gully traps and floor traps to prevent mosquitoes breeding in them.

Dengue fever is not easily diagnosed because it is often mistaken for flu, rubella or measles.

Dengue haemorrhagic fever is also called breakbone fever because it is characterised by severe pain in the back and joints. No vaccine has been developed yet for either fever. — ST

/12828
CSO: 5400/4399

## BRIEFS

TB EPIDEMIC IN CAPE TOWN--CAPE TOWN--Cape Town is in the grip of a TB epidemic. About 700 new cases are reported each month and the figure is increasing. An "alarmingly high" 400 new cases a month are reported from the Divisional Council area where most of the Crossroads refugees are living. The unrest had made fighting the disease much more difficult, said Divisional Council medical officer of health Dr Len Tibbitt, and the situation was cause for "considerable anxiety". "During any unrest all clinic attendances are down, simply because people are afraid to go out. All our clinics report that last month's figures are down and this is most marked in the black areas." It was vital for people to continue their treatment. "Defaulting on treatment is serious because the patient is likely to have a relapse and because partial treatment builds up resistance." The situation had been deteriorating for three years, said Dr Tibbitt. The City Council's medical officer of health, Dr Reg Coogan, said 300 new cases had been reported in his area in May -- an "unacceptably high" figure.--Sapa. [Text] [Johannesburg THE STAR in English 10 Jul 86 p 13] /13046

CSO: 5400/159

# INCREASE SEEN IN REPORTED CASES OF VIRAL HEPATITIS

Madrid EL PAIS in Spanish 3 Jul 86 p 22

[Text] Madrid--The improvement in the systems for collecting epidemiological data in the health centers and the notification thereof to the Madrid Regional Health Service has made it possible, during 1985 and 1986, to learn of a number of cases of vital hepatitis three times higher than that in 1984, although the real repercussions of the disease have not increased, as official sources from that service indicate.

The latest epidemiological bulletins from the Health Ministry reflect, in the section relating to diseases with compulsory reporting, figures on viral hepatitis in the Madrid region that are far higher than those of any other autonomous community in the state. Whereas, in Madrid, a weekly case number is cited that ranges between 350 and 400, in Barcelona about 30 were counted.

Viral hepatitis did not begin to be reported officially as part of the compulsory reporting of infectious diseases until 1982, according to Dr Rafael Bueno, chief of the Regional Health Service's epidemiological surveillance unit. In that year, the statistical computation was 2,403 cases. The next year, it was 5,828; in 1984, 5,372; and, in 1985, the year in which the reporting system began to improve, there occurred the first spectacular leap in figures: 16,444 cases.

Dr Bueno explains:"The recording of this statistical increase does not mean a spread of the disease, but rather the result of the improvement in the services for gathering and reporting epidemiological data."

He adds: "When viral hepatitis was included among the diseases with compulsory reporting, the reports were made only by the doctors associated with residential public assistance (APD); but, starting in 1985, the coverage of this recording of data was extended increasingly to health centers."

According to Bueno, "there has also been an increase in the number of reports of smallpox, mumps, and measles, but this increase does not actually relate to the existence of a larger number of cases at the present time."

Madrid has an incidence of hepatitis that is similar to that of other large Spanish cities, as Bueno notes, corresponding to an intermediate index on the international level. "It is a disease inherent in underdevelopment," he notes, "and its index declines as that on better conditions in the environment and in health education rises."

Sources from the Ministry of Health and Consumption stated, in connection with the statistical difference between Madrid and other regions regarding hepatitis, that "it could be due to the fact that the data have not yet been sufficiently expurgated in other communities." The same sources added: "There has been no increase in viral hepatitis in Spain."

As for the repercussions in Madrid, Bueno explained that, "Most of the cases, about 90 percent, are hepatitis A, which is generally benign, and does not become chronic, affecting the child population to a greater extent."

2909
CSO: 5400/2545

# 100,000 HEPATITIS B VIRUS CARRIERS REPORTED IN MADRID

Madrid EL PAIS in Spanish 8 Jul 86 p 20

[Text] Madrid--Approximately 100,000 Madrid residents are carriers of the hepatitis B virus, and about 30,000 of them are "healthy" carriers; that is, they can transmit the disease without suffering from it themselves. The report places special emphasis on the fact that the necessary information is now available for totally eradicating the disease, "and it only remains to overcome the obstacles hampering its rational implementation." The 750 newborns annually inheriting the disease will be the beneficiaries of the first vaccination program.

The statistics cited are contained in an extensive report prepared by the Hepatitis B Regional Commission (comprised of personnel from the Madrid community, Insalud [Institute of Health] and the professional clinical and public health areas), created especially to determine the extent of this disease in the region and its consequences for public health. The report stresses that hepatitis B entails "one of the leading public health problems in the area of communicable diseases," owing to the high rate of acute infections that it causes; because about 10 percent evolve toward chronic illnesses which, in turn, generate a large number of carriers responsible for the perpetuation of the disease.

The report estimates that nearly 1.1 million persons have suffered from the hepatitis B virus, most of them without noticing it. Approximately 1 million have been immunized, but the remaining 100,000 are carriers of the disease. Of them, 30,000 are only carriers and transmitters, but without suffering from it themselves; another 40,000 show a state of persistent chronic hepatitis, which means that they could live for many years, but confined to an increasingly closed circle of hospital and residence; while the remaining 30,000 suffer from active chronic hepatitis, which very often degenerates into cirrhosis of the liver, hepatocellular carcinoma, and death.

The contradictory aspect with the persistence of this disease, as Carlos Munoz, general health director of the community, and Luis Martin Alvarez, chairman of the commission, claimed, is the fact that they have the necessary information and techniques for eradicating it, but this has not yet been achieved, owing to the lack of material facilities.

The report cites the adoption of preventive measures and vaccination as the best strategy to follow in order to eradicate hepatitis B. There are population groups considered to be high risk, including newborns who are the children of carrier mothers, about 750 of whom are estimated as being born per year. The other groups are patients with hemodialysis and hemophiliacs, health personnel, those deeply mentally disturbed, drug addicts, homosexuals, and prostitutes. A high risk group, estimated at some 270,000 persons, consists of relatives and persons in the immediate surroundings of patients, because hepatitis B is contracted essentially from proximity and frequency of personal relations.

### Improvisation

The conclusions in the report note that, to date, the hepatitis cases have been treated one by one, as detected by doctors; which explains why the disease has continued to be very widespread, per se.

Of the 911 hemodialysis patients and hemophiliacs susceptible to contracting the disease, only 44 have been vaccinated, according to the data in the report; of the group with deep mental disturbances, none of the 560 susceptible persons has been vaccinated; in the group of drug addicts, two out of 2,000 susceptible persons have been vaccinated; and of the group comprised of homosexuals, prostitutes, and recluses, among others, making up a population of 51,600 susceptible persons, vaccination has reached 21 of them. Only the health personnel have pursued a program that has enabled half of the 5,325 susceptible cases to be vaccinated.

Carlos Munoz and Luis Martin told this newspaper that the tactic of treating case by case appears to be phasing out, "particularly if we consider the fact that some good vaccination programs could achieve the total eradication of the disease."

This fall, the first program will start, concentrated on the newborn of carrier mothers who are easier to detect and control. Next, an experimental program will be undertaken in the rural areas, where the population is also more readily controlled for medical purposes by the rural physicians subordinate to the Madrid community itself.

The treatment of the "normal" population is more complicated, and demands the cooperation of all physicians, both those attached to Insalud and those in the private sector. It would mean that, when a sick person was detected, his relatives would be subjected to analysis and treatment, and all the information would be centralized in the commission.

Carlos Munoz observed: "These preventive type programs require a large investment, both in the vaccines themselves and in the indicators to check the individual's subsequent progress; but, over the medium and long term, even good economic results would be accrued, because it is far more expensive to have to treat thousands of chronic patients later, for years."

2909
CSO: 5400/2545

# AIDS CASES SEEN TRIPLING BY 1988

Madrid YA in Spanish 25 Jun 86 p 41

[Text] Paris, EFE--The cases of acquired immune deficiency syndrome (AIDS) in Spain will have tripled in 1988, according to forecasts made by experts from the Spanish Ministry of Health and Consumption. According to this information, made public at the international meeting on the subject held in Paris under the sponsorship of the WHO, although the problem in Spain has features different from those in other industrialized countries, the cases are increasing at a similar rate.

According to the estimates of a group of Spanish experts, by the end of 1988, there will be about 250 reported cases, in contrast to 83 persons who had developed AIDS as of December 1985. The prediction was made by a team of researchers from the Health Ministry, based on a mathematical model.

The official statistics indicate that, in 1981, there was just one case of AIDS in Spain; but within 2 years, the number of diagnoses of that disease was eight, with a cumulative total of 10 patients. In December 1984, the patients stricken with this disease totaled 20; between 1980 and 1985, a total of 83 patients were counted; and it is predicted that there will be 116 cases by the end of 1986.

By 1987, the estimate made by the Health Ministry team shows 180 reported cases of AIDS; and, by the next year, it will reach 258. The study does not contain any estimate of persons possibly stricken with the virus. Those are the so-called "healthy carriers," or seropositives, who have been in contact with the virus and who could potentially transmit it, although they may not develop the disease.

The report goes on to say that the data "show an increasing morbidity of AIDS among high risk groups and some special features different from those shown by most of the European countries. That peculiarity in the Spanish AIDS situation lies in the fact that most of those affected are intravenous drug addicts, and the proportion of hemophiliacs is relatively high."

## The Majority, Drug Addicts

According to a descriptive study of the actual AIDS cases prepared by the National Microbiology Center in Majadahonda (Madrid), 36 of the 83 cases reported as of last year were related to that type of drug addict. The statistics also note that 26 AIDS victims were homosexuals or male bisexuals, and that hemophiliacs were involved in 17 cases. The official study indicates, moreover, as another peculiar feature of the disease in Spain, the lesser incidence of Kaposi sarcoma.

Another study made at the Trias and Pujol Brothers Hospital of the Autonomous University of Barcelona, on high risk groups, was one wherein the doctors analyzed the blood of a group of 309 homosexuals who visited a venereal disease center in the city of Barcelona between September and December 1985. It was found that 26.8 percent had been in contact with the virus. That relatively large proportion increases dramatically in the data resulting from the blood tests on drug addicts, wherein 71.3 percent proved seropositive. In the control group (consisting of 1,025 voluntary blood donors), the presence of the virus that can cause AIDS was minimal, with an incidence of 0.09 percent.

2909
CSO: 5400/2545

## BRIEFS

**AIDS DEATHS REPORTED**--The dreaded disease AIDS--Acquired Immune Deficiency Syndrome--has killed 253 people in Tanzania since the disease first started in that country in 1983, according to [Tanzanian] Health Minister Aaron Chiduo. Addressing Parliament in Dar es Salaam, Mr Chiduo said an additional 493 people have been infected with the disease, with the majority being identified in Tanzania's Western Kagera Region, which borders Uganda, Rwanda, and Burundi. [Text] [Nairobi Domestic Service in English 1600 GMT 11 Jun 86 EA] /9274

CSO: 5400/161

## AIDS FOREMOST KILLER; RACIAL FACTOR BEING STUDIED

**Port-of-Spain SUNDAY GUARDIAN in English 20 Jul 86 p 1**

**[Article by Norris Solomon]**

**[Text] The disease AIDS is the greatest killer of young men between the ages of 21 and 40 in Trinidad and Tobago.**

**It is now spreading increasingly and alarmingly to the female population.**

**So said Professor Courtenay Bartholomew, of the University of the West Indies School of Medicine, when he delivered the Amoroso Memorial Lecture on Friday night in Port-of-Spain, organised by the Trinidad and Tobago Medical Association.**

**Prof Bartholomew said that of the 100 AIDS cases up to June 15 this year, 73 per cent were among males in the 21-40 age group.**

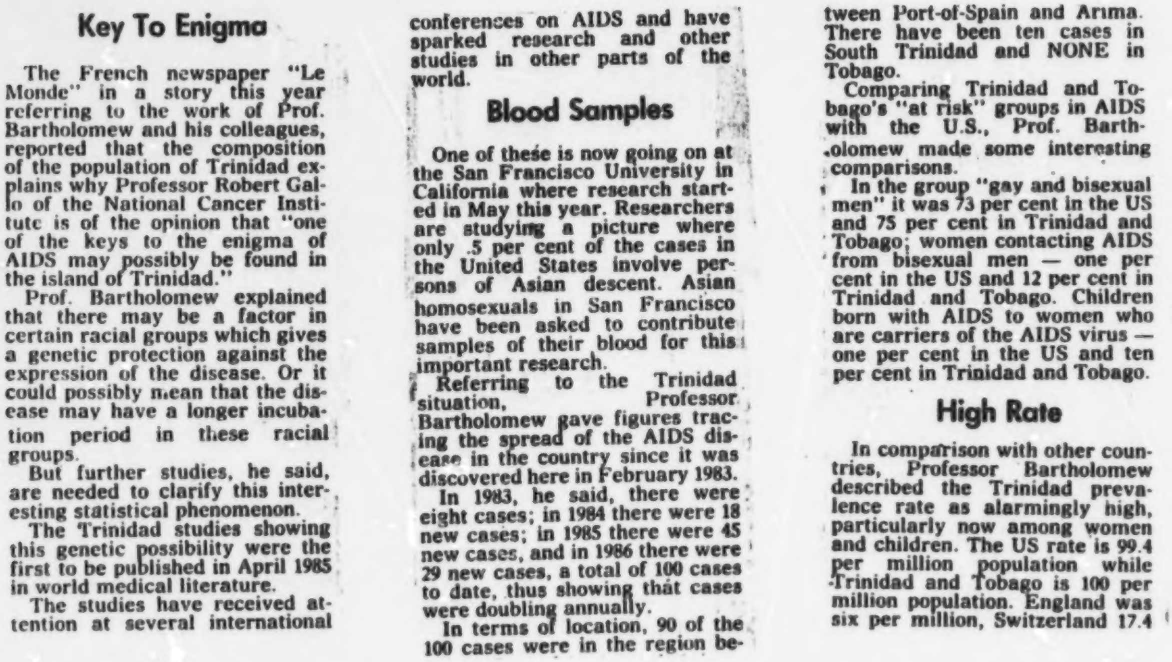
### Genetic Factors

**Of the 100 cases, 12 have been women and ten have been babies. Eighty of the 100 have died.**

**Prof Bartholomew has just returned from the second International Conference on AIDS (Acquired Immune Deficiency Syndrome) held in Paris, where he presented a paper on the Trinidad experience. Apart from the high rate of the disease per population, the Trinidad situation has attracted international attention because of the possible genetic factors involved in the disease seen here.**

**He gave figures on Friday night showing the ethnic distribution of AIDS in this country. The highest affected group was African origin (81 per cent), with only two per cent in the East Indian origin group.**

**Although it is reported, he said, that homosexuality is as common among people of East Indian descent, as those of African origin, and even though people of East Indian origin are also carriers of the virus (almost to the same percentage of those of African origin), the East Indians are not dying of the disease.**



## Key To Enigma

The French newspaper "Le Monde" in a story this year referring to the work of Prof. Bartholomew and his colleagues, reported that the composition of the population of Trinidad explains why Professor Robert Gallo of the National Cancer Institute is of the opinion that "one of the keys to the enigma of AIDS may possibly be found in the island of Trinidad."

Prof. Bartholomew explained that there may be a factor in certain racial groups which gives a genetic protection against the expression of the disease. Or it could possibly mean that the disease may have a longer incubation period in these racial groups.

But further studies, he said, are needed to clarify this interesting statistical phenomenon.

The Trinidad studies showing this genetic possibility were the first to be published in April 1985 in world medical literature.

The studies have received attention at several international conferences on AIDS and have sparked research and other studies in other parts of the world.

## Blood Samples

One of these is now going on at the San Francisco University in California where research started in May this year. Researchers are studying a picture where only .5 per cent of the cases in the United States involve persons of Asian descent. Asian homosexuals in San Francisco have been asked to contribute samples of their blood for this important research.

Referring to the Trinidad situation, Professor Bartholomew gave figures tracing the spread of the AIDS disease in the country since it was discovered here in February 1983.

In 1983, he said, there were eight cases; in 1984 there were 18 new cases; in 1985 there were 45 new cases, and in 1986 there were 29 new cases, a total of 100 cases to date, thus showing that cases were doubling annually.

In terms of location, 90 of the 100 cases were in the region between Port-of-Spain and Arima. There have been ten cases in South Trinidad and NONE in Tobago.

Comparing Trinidad and Tobago's "at risk" groups in AIDS with the U.S., Prof. Bartholomew made some interesting comparisons.

In the group "gay and bisexual men" it was 73 per cent in the US and 75 per cent in Trinidad and Tobago; women contacting AIDS from bisexual men — one per cent in the US and 12 per cent in Trinidad and Tobago. Children born with AIDS to women who are carriers of the AIDS virus — one per cent in the US and ten per cent in Trinidad and Tobago.

## High Rate

In comparison with other countries, Professor Bartholomew described the Trinidad prevalence rate as alarmingly high, particularly now among women and children. The US rate is 99.4 per million population while Trinidad and Tobago is 100 per million population. England was six per million, Switzerland 17.4 per million and Germany 7.5 per million.

At the moment, he said, there are 22,000 people in the US with AIDS, and the rate is doubling every year. It is expected that by 1991 there will be 270,000 people in the US with AIDS or will have died from the disease.

It is also estimated there are between one and two million carriers of the disease in the US. In Trinidad, carriers of the virus are estimated at between one to two thousand.

AIDS is a major health problem in Africa, he said, where men and women are equally affected and it is a heterosexual problem in that continent, and not a homosexual one.

Blood Cancer

A scientific paper presented by Dr Bartholomew and his collaborators in Trinidad and the US at the recent Paris meeting revealed, among other things, that the group of homosexuals studied in Trinidad showed not only that 40 per cent carried the AIDS virus, but there was also a seven-fold increase in the prevalence rate of carriage of the leukemia virus, HTLV1 which causes cancer of the blood.

The AIDS virus is called HTLV3 and is closely related to HTLV1, but it is not the same virus. The importance of this scientific observation is the potential here that double viral presence can lead to new and strange diseases.

The Paris conference, Prof Bartholomew said, confirmed that infection by accidental needle sticks is extremely rare and also that there was no evidence of transmission of the virus among non-sexual contacts of households of people, who are suffering from AIDS or are carrying the virus.

In other words, he said, AIDS is not spread by casual contact.

However, he stressed that the virus has found a sanctuary in cells in the brain called "macrophages", adding to the difficulty in treatment. Other bad news was that the vaccine is difficult to produce and will probably be ineffective in those already infected and that infected individuals do not produce effective neturalising antibodies.

Prof. Bartholomew commended nurses at the Port-of-Spain General Hospital for the unselfish way in which they were treating AIDS patients — without fear and without discrimination.

He ended by saying that the AIDS virus is a threat to the human species and is "revolutionising the sexual revolution."

The message is clear, he said.

The Port-of-Spain General Hospital AIDS Study Group comprises Professor Courtenay Bartholomew, Drs Farley Cleghorn, Waveney Charles, Bisram Mahabir, Leslie Roberts, Everard Barton, Keith Aleong, Eric Cameron, Khamedaye Basdeo-Maharaj, Marilyn Suite and colleagues of the San Fernando General Hospital, as well as Dr Robert Gallo's research team in Bethesda, Maryland, USA.

/9274
CSO: 5440/104

# HIGHER MALARIA INCIDENCE REPORTED IN 1986

Istanbul MILLIYET in Turkish 31 May 86 pp 3,13

[Report by Hatice Ozer]

[Text] Ankara--It was disclosed that Turkey is faced with the peril of malaria and that the disease, which was brought under control as a result of efforts made since 1977, has once again assumed dangerous proportions because of weather conditions.

Utku Unsal, Director General of Basic Health Services of the Ministry of Health and Social Assistance, said that physicians working in health centers and hospitals in mosquito-infested rural areas have been instructed to test patients with high fever for malaria.

## Sevenfold Increase

Unsal reported that the number of malaria cases in Turkey dropped from 5,668 in 1984 to 3,075 in 1985 and that this figure rose to 4,956 as of the end March 1986. Unsal added that the number of malaria cases in Samsun Terme jumped from 3 in 1983 to 350 in 1985.

Unsal said that 65 malaria cases were diagnosed [in Samsun Terme] as of the end March 1986. Unsal continued: "It is feared that the number of cases may increase to 1,000 if effective measures are not implemented."

Noting that this sharp rise in Samsun was caused by irrigation canals in the Carsamba Plain, Unsal said:

"The locations where malaria is most frequently encountered in Turkey are Adana, Hatay, Mersin and the southeastern Anatolia region.

"In the Karatas region of Adana, the malaria problem will be 75 percent solved by pumping the water collected in the Seyhan Plain, which is below sea level, into the sea.

"Since a small puddle of water can breed hundreds of mosquitoes, the State Hydraulic Affairs Department and the municipalities are working on the problem urgently."

Meanwhile, Professor Nusret Fisek, President of the Turkish Physicians' Association, said that the plans of the Ministry of Health and Social Assistance to eradicate malaria with its current organization cannot be anything more than a dream.

Stating that since the Cukurova region is a center of employment it is filled with people from all corners of Turkey and that as a result malaria is being spread to all parts of the country, Fisek said: "Early diagnosis, education of the people and measures to combat mosquitoes are essential in the battle against malaria."

9588
CSO: 5400/2542

# UGANDA

## BRIEFS

**BUBONIC PLAGUE IN NORTHWEST**--(Paida) Market in Nebbi District [northwest Uganda] has been closed due to an outbreak of bubonic plague in (Paida) town and surrounding areas. In a statement issued in Entebbe yesterday, the director of medical services, Dr (Ekyeno) said the movement of people in the area is restricted. [TExt] [Kampala Domestic Service in English 1000 GMT 15 Jul 86 EA] /9274

CSO: 5400/161

## 1985 HEALTH STATISTICS FOR SCOTLAND RELEASED

Edinburgh THE SCOTSMAN in English 23 Jun 86 p 7

[Article by David Appleton]

[Text]

The number of people on waiting lists for operations in Scotland fell last year, to 78,327 in September, compared with 83,077 a year before, according to figures issued yesterday by the Scottish Office.

Preliminary health statistics for 1985 also shows an increase in the number of operations carried out, from 401,343 in 1983 to 419,633 in 1984. There were significant increases in hip replacement, varicose vein, heart valve repair, and eye lens operations.

Commenting on the figures, Mr John MacKay, Scottish Health Minister, said the figures revealed a general picture of improvement of health services. There were more staff in the NHS in Scotland providing services to patients than at any time in the past.

He said: "There is a clear increase in the level of patient care — more patients have been treated, more operations carried out, and more cervical smear tests have been taken. Waiting lists are down again, by 10,000 in the last two years. Infant and perinatal mortality rates and stillbirth rates are the lowest on record."

The publication shows that the number of staff in NHS in Scotland continues to grow, from 128,460 in 1984 to 129,184 last year. The number of doctors increased from 9,377 to 9,398 while the number of general practitioners rose from 3,169 to 3,224. In the same period the number of nurses and midwives rose from 62,027 to 67,718.

General practitioners had an average of 1,664 patients last year, compared with 2,021 in 1965. Only 3.1 of GPs had more than 2,500 patients, compared with 3.8 per cent in 1984 and 34.4 per cent in 1965.

The dental health of children appears to be improving, with 41 per cent of children whose teeth were checked by school dentists found to have defects, compared with 50 per cent in 1980 and 69 per cent in 1970. The average cost of dental treatment was £20.80, of which patients were charged 41 per cent, compared with 37 per cent in 1984.

There was a continuing increase in the number of cases of cancer, with the largest category being that of the lung, trachae, and bronchus, followed by female breast cancer.

The number of residents in mental hospitals and psychiatric units continued to fall, as more were treated in the community. The number reduced from 18,297 in 1970 to 15,371 in 1984.

Immunisation rates improved, with that for measles in particular rising from 64.3 per cent in 1984 to 72.7 per cent last year.

While the number of outbreaks of food poisoning fell during 1985, from 236 to 185, the number of people involved rose, from 2,646 to 3,175, with the number of deaths increasing from one to five. In many cases the food implicated was chicken and turkey.

The number of abortions carried out remained almost unchanged, at 9,110, compared with 9,107 in 1984.

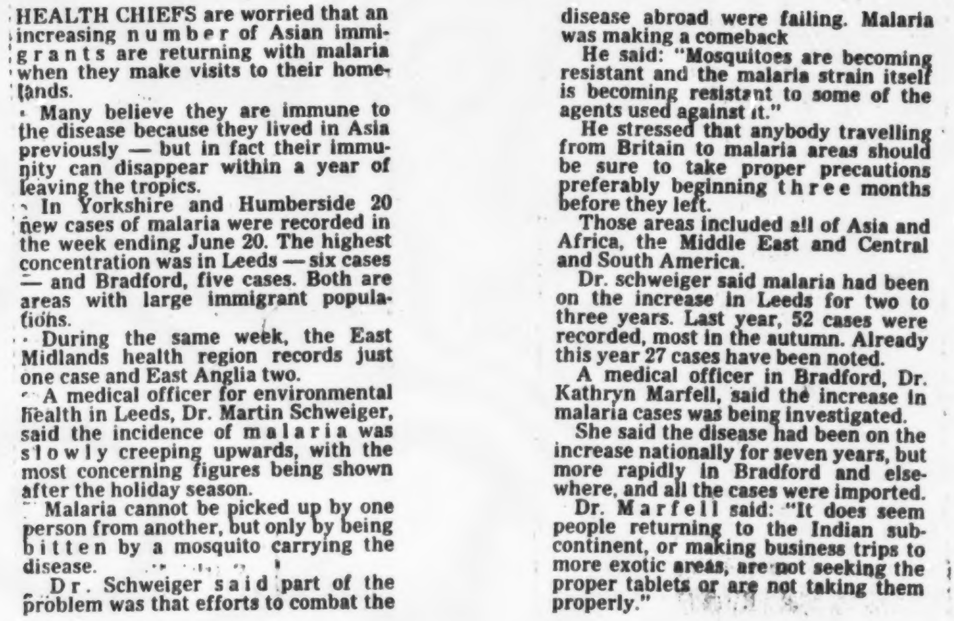
/12828
CSO: 5440/099

## MALARIA BROUGHT BY ASIAN IMMIGRANTS SPARKS CONCERN

Leeds YORKSHIRE POST in English 2 Jul 86 p 11

[Article by John Furbisher]

[Text]



HEALTH CHIEFS are worried that an increasing number of Asian immigrants are returning with malaria when they make visits to their homelands.

Many believe they are immune to the disease because they lived in Asia previously — but in fact their immunity can disappear within a year of leaving the tropics.

In Yorkshire and Humberside 20 new cases of malaria were recorded in the week ending June 20. The highest concentration was in Leeds — six cases — and Bradford, five cases. Both are areas with large immigrant populations.

During the same week, the East Midlands health region records just one case and East Anglia two.

A medical officer for environmental health in Leeds, Dr. Martin Schweiger, said the incidence of malaria was slowly creeping upwards, with the most concerning figures being shown after the holiday season.

Malaria cannot be picked up by one person from another, but only by being bitten by a mosquito carrying the disease.

Dr. Schweiger said part of the problem was that efforts to combat the disease abroad were failing. Malaria was making a comeback

He said: "Mosquitoes are becoming resistant and the malaria strain itself is becoming resistant to some of the agents used against it."

He stressed that anybody travelling from Britain to malaria areas should be sure to take proper precautions preferably beginning three months before they left.

Those areas included all of Asia and Africa, the Middle East and Central and South America.

Dr. schweiger said malaria had been on the increase in Leeds for two to three years. Last year, 52 cases were recorded, most in the autumn. Already this year 27 cases have been noted.

A medical officer in Bradford, Dr. Kathryn Marfell, said the increase in malaria cases was being investigated.

She said the disease had been on the increase nationally for seven years, but more rapidly in Bradford and elsewhere, and all the cases were imported.

Dr. Marfell said: "It does seem people returning to the Indian subcontinent, or making business trips to more exotic areas, are not seeking the proper tablets or are not taking them properly."

/12828
CSO: 5440/099

## HOSPITAL DOCTOR VACANCIES FORCING TREATMENT RESTRICTIONS

London DAILY TELEGRAPH in English 17 Jun 86 p 4

[Article by David Fletcher]

[Text]

**HOSPITALS will be forced to restrict the number of patients they treat unless more doctors can be recruited to fill hundreds of vacant posts, the Hospital Consultants and Specialists Association said yesterday.**

A survey it had conducted among all 191 district health authorities has found an acute shortage of junior doctors, with all regions reporting difficulty in finding staff.

Mr Stephen Charkham, an official of the association, said: "Crisis is an overworked word, but there is no doubt that is what hospitals are now facing.

"We have warned Mr Fowler, Social Services Secretary, that unless the Government acts to attract more doctors into the hospital service, it is inevitable that fewer patients will be treated and that waiting lists will grow longer."

### Prefer to be GPs

The crisis has arisen because the majority of newly-trained doctors prefer to take jobs as family practitioners—where they can earn over £20,000 a year while still in their 20s—compared with the uncertainties of a career in hospital medicine.

NHS personnel officers also attribute the crisis to legislation introduced a year ago to reduce the number of overseas doctors employed in Britain.

Mr Charkham said: "Health authorities now find themselves in the ridiculous position of trying to fill vacancies by recruiting in the EEC because they are no longer able to employ Commonwealth doctors. The whole thing is a nonsense."

The shortage of junior doctors disclosed by the consultants' survey is worst in orthopaedic and accident and emergency departments, but is also serious in anaesthetics, ear, nose and throat departments and ophthalmology.

### Four surgeons

One NHS personnel officer in Bristol told the consultants he had surveyed 140 newly-qualified doctors. Only 10 were interested in a career in hospital medicine.

Consultants in Ipswich have written direct to Mr Fowler saying: "We fear that there may soon be no more than four surgeons who are capable of operating.

"We may have to reduce the elective (ie routine) operations in order to accommodate in-patient fracture treatment as there would be no supporting staff."

Nearly all the vacancies which hospitals cannot fill are at the level of senior house officer where salaries range from £10,150 to £11,510.

Although there is no overall shortage of doctors, newly qualified members of the profession are reluctant to go into hospital medicine. They see hundreds of registrars stuck on salaries of about £13,000 and unable to gain promotion because there are not enough consultant posts for them to fill.

### 'Specialist' grade

The Consultants Association is urging the Government to break the log-jam by creating a new hospital grade of "specialist" with salaries comparable to those of family doctors, just over £25,000.

This would be attractive to many registrars who now despair of ever becoming consultants and would hold out the prospect to juniors of a worthwhile careeer in hospital medicine and hence encourage them to apply for junior doctors's posts.

Mr Charkham said: "It is imperative we find a solution such as this. Unless a career in hospital medicine is made more attractive there is no question that the standard of the service will decay and patientts will suffer."

/9274
CSO: 5440/097

## BRIEFS

HOSPITAL WAITING TIME CUT--A plan to cut hospital waiting lists by appointing more hospital consultants and by creating a new post of specialist hospital doctor is being drawn up by the Department of Health. An extra 100 consultants are to be appointed within two years and existing consultants over the age of 60 are to be offered early retirement to open career opportunities for the hundreds of fully trained junior doctors whose promotion is at present blocked. The Department of Health is also planning to create a new grade of hospital specialists for an estimated 1,400 doctors who want a career in hospital medicine but who do not aspire to become consultants. The new structure is intended to end the present situation where hospitals have a shortage of newly qualified doctors and a surplus of highly trained doctors who cannot get consultant posts. The plan falls short of the Governments original intention of doubling the number of consultants by 1994 but was welcomed as a step in the right direction both by junior doctors and by consultants yesterday. Mr Stephen Charkham of the Hospital Consultants and Specialists Association said: "Improving staffing will enable further services to patients to be improved and that in turn should lead to cuts in the waiting list". [Text][London DAILY TELEGRAPH in English 26 Jun 86 p 4]/12828

CSO: 5440/099

## BRIEFS

2,500 CHILDREN VACCINATED--About 2,500 children have been vaccinated against six killer diseases in the past two weeks in the Morondera district, the local community sister, Cde Rose Mujeni, has said. Macheke Rural Council had the highest turnout with more than 1,300 children vaccinated within three days of the arrival of the immunisation team in the area. Eighty-nine of the children vaccinated had never been immunised before. [Text] [Harare THE HERALD in English 3 Jul 86 p 11] /9274

CSO: 5400/158

# DUCKS REPORTED DYING IN HAMILTON HARBOR POLLUTION TEST

Toronto THE GLOBE AND MAIL in English 17 Jul 86 p A8

[Article by Michael Keating]

[Text]

Nearly a quarter of the ducks put in Hamilton Harbor five weeks ago to test for toxic chemicals have mysteriously died.

An autopsy yesterday found "their digestive tracts had black, oozy, oil-like material in them," D. V. (Chip) Weseloh, a federal wildlife scientist, said in an interview.

The six ducks were "extremely emaciated," had "absolutely no body fat whatsoever" and their livers had atrophied, he added.

Dr. Weseloh, a Canadian Wildlife Service researcher, said that although the ducks were in a starved condition, there seemed to be adequate food in the area. He said they will be closely examined to see if they were killed by a natural virus or by pollution from the highly contaminated harbor.

The birds were part of an experiment in which 25 white Peking ducks, raised in a chemically clean laboratory, were placed in the harbor to see if pollution is moving up the local food chain. International reports have described Hamilton Harbor as one of the most polluted in the Great Lakes.

As of yesterday eight more of the birds were missing and 11 were found alive. Two of them were emaciated and six appeared to be deteriorating. Only three appeared healthy. Mr. Weseloh said he plans to leave the 11 ducks in the harbor for the present.

Similar ducks kept at a farmer's pond in nearby Ancaster for comparison were healthy yesterday.

The Hamilton ducks were supposed to be left in the harbor until mid-September when they were to be killed and analyzed for pollution levels.

An Ontario Environment Ministry report released yesterday said that the harbor is polluted with pesticides, industrial chemicals and heavy metals. There are warnings about eating fish from its waters.

In the past, federal researchers have found skin, lip and liver tumors in some of the fish from the harbor.

Dr. Weseloh said a pathologist at the University of Guelph will test the dead ducks for natural agents which could have killed them. A federal laboratory in Ottawa will test them for chemicals.

As part of the experiment, another 25 ducks were put in the St. Clair River, downstream from Canada's chemical valley and an area of many chemical spills. Dr. Weseloh said that as of last Saturday those ducks were all accounted for but yesterday he sent a researcher to the area to check on them.

Dr. Weseloh, who works at the Canada Centre, only a few hundred metres from the duck test in Hamilton Harbor, said some of the Hamilton birds were missing two weeks ago "but we were not surprised because we thought they might be off in the weeds somewhere."

By last Friday five were missing and on Tuesday he was called by an employee of National Slag Ltd., an industry on the Windermere Basin section of the harbor, who said there were dead ducks on the shoreline.

Dr. Weseloh said he found the ducks a short distance from the water. "They looked as if they had just pulled themselves up into weeds and keeled over." The dead birds had "an oily-like substance on their bellies," he said.

Dr. Weseloh said the purpose of the test was to find out if industrial pollution is affecting local wildlife. When asked about the implications of pollution for human health the researcher said that Health and Welfare would have to comment on that issue.

Two years ago, Dr. Weseloh made headlines when then environment minister Suzanne Blais-Grenier cancelled his research program on toxic chemicals in Great Lakes herring gulls.

Under mounting public pressure she reinstated part of the project, which was aimed at finding out what contaminants in the lakes move up the food chain and could affect humans.

/9274
CSO: 5420/88

## BRIEFS

NOVA SCOTIA HARBOR POLLUTION--Woods Harbour, N.S.--Fishermen in southwestern Nova Scotia want health officials to find the source of water pollution that has forced one fish plant to process its product elsewhere. High bacterial counts were found last month in seawater used in processing by six area plants. Leighton Nickerson, president of the Woods Harbour-Shag Harbour-Bear Point Fishermen's Association, said yesterday that the industry could be devastated if the pollution source isn't quickly identified. [Text] [Toronto THE GLOBE AND MAIL in English 1 Jul 86 p A5] /9274

WEST COAST RED TIDE--Vancouver--Red tide has shut down shell fishing on most of the West Coast. Only three small areas on the east coast of Vancouver Island are still open, and officials are warning fishermen to check with the department before digging for clams, oysters or mussels. Red tide is a condition that develops when a toxic plankton in the ocean multiplies rapidly. Shellfish eat the plankton and, while it does not harm them, it is poisonous to humans. "A person would feel a tingling of the lips and mouth, and if someone ate too much, it could cause death," Charles Campbell, of the fisheries' inspections division, said. [Text] [Toronto THE GLOBE AND MAIL in English 12 Jul 86 p A3] /9274

SHELLFISH HARVEST BAN--Vancouver--For the first time in six years, the federal Fisheries Department has banned harvesting of bivalve shellfish along the West coast because of red tide. The ban applied to mussels, clams and oysters, but not crustaceans such as crabs, shrimp and prawns. Tests of British Columbia shellfish have revealed amounts of red-tide toxin substantially higher than levels that killed a man who ate poisoned clams in 1980. A test of mussels harvested this week north of Powell River produced a reading of 14,000 micrograms of toxin per 100 grams of meat. Levels above 80 micrograms are considered unsafe. Red tide is a condition that develops when a toxic plankton in the ocean multiplies rapidly and is eaten by bivalves. [Text] [Toronto THE GLOBE AND MAIL in English 18 Jul 86 p A5] /9274

OKANAGAN LAKE FISH DISEASE-Kelowna, B.C. (CP)--An unknown disease is being blamed for killing thousands of fish--mostly two-year-old Kokanee salmon--in Okanagan Lake. Fisheries biologist Chris Bull said results of tests won't be available for several weeks. [Text] [Toronto THE TORONTO STAR in English 15 Jul 86 p A8] /9274

CSO: 5420/88

# CEM VENEREAL DISEASE SEEN HURTING HORSE EXPORTS

Oslo AFTENPOSTEN in Norwegian 30 Jun 86 p 11

[Article by Arne M. Bakken]

[Text] "We are in danger of losing our Norwegian pony exports to the United States. Since a horse in Norway was found to have the venereal disease C.E.M. some time ago, the American authorities have refused to allow Norwegian ponies into that country. We now have four Norwegian ponies waiting for the approval of American veterinary authorities for export to the United States," Jon Hegdal, chairman of the Norwegian Pony Association, told AFTENPOSTEN.

In recent years, the Norwegian Pony Association has exported about 20 Norwegian ponies annually to the United States. "Recently, we have noticed an enormous interest in Norwegian ponies in the United States. We have orders for 15 Norwegian ponies, in addition to the four now waiting to be exported. These orders and future exports will be in jeopardy, unless Norwegian veterinary authorities act quickly and declare that no C.E.M. has been detected in Norwegian ponies. If we are classified as a C.E.M. country, then Norway will be subject to harsh restrictions on the export of Norwegian ponies. I believe this would be most unfortunate, since we are now experiencing a strong interest in Norwegian ponies in the United States," Jon Hegdal said.

## Rumors

He also said it would be extremely regretable if restrictions were placed on the import Norwegian ponies, since Norwegian veterinary authorities have not stated that C.E.M. has been demonstrated to be present in horses in Ostlandet. "Now the mood in the United States is characterized by uncertainty and rumors. I believe the veterinary authorities must now take this situation seriously and give the American authorities some real information on the extent of the disease. Otherwise, the export of Norwegian ponies to the United States, a new industry with great possibilities for growth, will suffer a major setback before it really gets underway," said Jon Hegdal.

He has personally sought information from the veterinary authorities and is disappointed by the nonchalant attitude he has found among them. "It does not appear that the authorities appreciate the seriousness of the matter or that they are interested in taking the initiative," Jon Hegdal, chairman of the Norwegian Pony Association, told AFTENPOSTEN.

9336
CSO: 5400/2544

## BRIEFS

**ANIMAL DISEASE FIGHT URGED**--The Deputy Minister of Trade and Commerce, Cde Chimbidzayi Sanyangare, has appealed to people living in Nyanga along the border with Mozambique to monitor the movement of livestock across the border to curb the spread of diseases. Speaking at Nyafaru ranch at the weekend following the outbreak of brucella mametensis, a disease which has killed many goats in the area in recent weeks, Cde Sanyangare appealed to the people to help control the spread. He also urged people in the area to monitor the movement of the displaced Mozambicans in a bid to identify bandits operating in Mozambique. Genuine displaced Mozambicans, he said, should be handed over to the police who in turn would repatriate them to Nyamombe or Tongogara camps. Cde Sanyangare disclosed that some people had died in the border area three weeks ago, following the spread of cholera from Mozambique. [Text] [Harare THE HERALD in English 3 Jul 86 p 11] /9274

CSO: 5400/158

## CANADA

### BRIEFS

**MANITOBA BEE QUARANTINE**--Brandon, Man.--Thirty-four bee colonies belonging to seven keepers in Manitoba have been quarantined after they were found to contain a dangerous parasite, Manitoba's chief bee scientists said Monday. The acarine mite was discovered in samples of bees imported from South Carolina in April, apiarist Don Dixon said. This is the first time the deadly mite has been detected in Canada since it migrated north from Mexico and spread through the U.S. two years ago. The mite, blamed for widespread damage in Europe, burrows into a bee's thorax, crippling its ability to fly and produce honey. Under the quarantine, bee keepers will have to destroy their bees at the end of the season. [Text] [Toronto THE GLOBE AND MAIL in English 16 Jul 86 p A4] /9274

CSO: 5420/89

## BRIEFS

**MANGO WEEVIL DISEASE**—Roseau, Thursday (CANA)--Dominica's Agriculture Ministry is taking steps to minimise the effect of a ban on the importation of the island's mangoes by some Caribbean territories. Barbados, and St Thomas and St Croix of the US Virgin Islands are not allowing the entry of Dominican mangoes because of the presence of the mango weevil disease on the island. But chief technical officer in the Ministry of Agriculture Colin Bully said a survey had shown that only the southern part of the island was clearly affected. [Text] [Port-of-Spain DAILY EXPRESS in English 18 Jul 86 p 15] /9274

CSO: 5440/102

# AFRICAN BEE CONTROL STRATEGY TO INVOLVE HYBRIDIZATION

Mexico City EXCELSIOR in Spanish 14 Jun 86 STATES section pp 1, 4

[Excerpt] Tuxpan, Veracruz, 13 June--One of the leading measures that the beekeepers in the northern part of the state will adopt to counter the possible honey losses from the imminent penetration by the African bee is to have the latter interbred with European queen bees and to procure a new species that will be productive and not destructive.

The head of the Beekeepers Association of this town, Leopoldo Priante Vidal, made the foregoing claim, declaring: "At the beginning of next year we shall be facing this problem, and if it is not surmounted, we shall fail to receive $1.2 million, which is the value of the honey exports to Germany and France."

He noted: "The African bee could strike 80 percent of the production, but there is optimism in the sector for succeeding, provided European queen bees are brought in."

In the event that the damage occurred here, there would be damage amounting to an average of 40,000 crates providing 1,200 tons of honey per year; and, therefore, the beekeepers of the "Huasteca Veracruzana" [the Veracruz portion of the Huasteca, which is an area roughly described by the states of Veracruz and San Luis Potosi] are cooperating with government agencies to more clearly determine the measures involving the insect in the national territory.

Priante Vidal explained: "The key to combat the species is through the use of queen bees, a method implemented by Venezuelan beekeepers with positive results; and, although their honey production declined 50 percent this year, they are managing to export the product."

2909
CSO: 5400/2075

## LOCUST THREAT, PREVENTIVE CAMPAIGN OUTLINED BY OFFICIAL

Niamey LE SAHEL DIMANCHE in French 1 Jun 86 pp 6, 7

[Interview with Mr Ismale Mouddour, director of the National Office of Plant Protection, by Kailou Youssouf; date and place not given.]

[Text] [LE SAHEL DIMANCHE] After the drought, another calamity is threatening Africa: an invasion of desert locusts which are readying to sweep down on thousands of hectares of crops in West Africa and East Africa. Where do these locusts come from? What does the situation look like for our country?

[Ismael Mouddour] First, the distinction must be made between locusts and sauteriaux [grasshoppers]. Although both types of insects belong to the Acrididae family, we differentiate between them according to ability to travel great distances.

Sauteriaux are Acrididae that do not readily gather in swarms. Desert locusts are migratory Acrididae that we divide into four species: the African migratory locusts or locusta migratoria migratoroides, the red locust or nomadacris septemfasciata, the Moroccan locust or diociostaurus maroccanus and the desert locust or schistocerga gregaria.

Our country could be threatened by two of them in particular: the African migratory locust or locusta migratoria migratoroides and the desert locust or schistocerga gregaria.

Desert locusts know no boundaries. Often the area of swarm formation, that is the area in which they develop or multiply, is different from the area they invade. Small groups may set out from India, Afghanistan, Saudi Arabia, Ethiopia, Sudan, Somalia, Chad, Niger, Mali, Senegal. In Niger, the swarm formation zone for these locusts is the air region. As long as desert locusts are isolated, they are not capable of traveling in numbers. But, given the right conditions (green areas along their routes), they will assemble and form swarms. There is great danger when a swarm does form because it is practically impossible to apply countermeasures. (In a time of widespread invasion, the swarms can invade some 60 countries lying in the invasion zone which covers 30 million sq km. A swarm travels at a speed of 1.5 to 15 km per hour. The swarms cover distances from several kilometers to more than 100 km in a day and up to 3,500 km in a month.)

[Question] What are the methods of combatting these migratory locusts?

[Answer] These locusts are dealt with in a preventive manner. Swarm formation zones must be kept under close and constant watch to prevent formation and thereby nip the problem in the bud.

In view of the magnitude of the problem with these two types of locusts, international organizations were created to combat them: the OICMA (International African Migratory Locust Organization) located in Bamako and the OCLALAV (Joint Anti-Locust and Anti-Aviarian Organization) located in Dakar.

[Question] But these organizations are practically defunct?

[Answer] The OICMA was in fact dissolved, following the meeting of its board of directors in Bamako, in view of enormous financial problems. But the OCLALAV exists even though it is currently encountering enormous operational problems mostly due to the non-payment of dues by its member-nations. These organizations are indispensable because one nation alone cannot combat this scourge. Thus, OCLALAV sees to detection and treatment in the fight against desert locusts.

[Question] But OCLALAV is no longer operational?

[Answer] Here in Niger, OCLALAV exists and performs detection work at Zinder, albeit with very modest means. But this division's agents intervene to destroy the first larvae.

Nonetheless, OCLALAV has serious problems. And our concern is to revitalize it by providing it with the necessary means.

[Question] By doing what, in concrete terms?

[Answer] An effort is being made at the national level to provide OCLALAV the means to carry out detection work. International aid must also support the organization. e awareness of the international community has been raised by the ICDCS [Permanent Interstate Committee for Drought Control in the Sahel], the FAO and by our country for the support of OCLALAV for this season in the preventive fight against the desert locust.

[Question] What has been done to combat grasshoppers?

[Answer] The fight against grasshoppers is the responsibility of the national agencies for plant protection. The FAO's appeal to the international community primarily applies to the fight against grasshoppers. Thus, it is a matter of strengthening the capacity of the national agencies to take action.

As of last year, some countries that had large infestations of grasshoppers appealed for international aid. The national agencies in those countries took action but a residual population remained and laid eggs in the zones under attack. With the first rains of the year, the eggs will hatch and the grasshoppers will first attack seedlings.

It is because of the level of grasshopper infestation last year in some countries of the Sahel, the laying and hatching of larvae while seedlings are still young--a very critical time--that the ICDCS and the FAO called the attention of the international community.

[Question] Has the international community responded yet?

[Answer] There was a meeting at the FAO in Rome initiated jointly by the ICDCS and the FAO. it is a question of explaining to the donors the matnitude of the grasshopper threats to the Sahel. Some countries have already responded.

[Question] In these circumstances, would subregional cooperation not be desirable--to rely on one's own strengths first?

[Answer] Coordination has already begun under the ICDCS concerning the general problem of plant protection. A common program of plant protection for the Sahel has been drawn up. This is a common combative strategy that includes all aspects: research, integrated efforts, training, traditional method, legislation, the quarantine problem, plant inspection. The common strategy was adopted and amended at the last summit of ICDCS chiefs of state in Dakar.

[Question] How is Niger preparing to combat grasshoppers?

[Answer] In each department we have distributed chemicals and treatment devices. In conjunction, a training program for farmers was held and an awareness campaign for village task forces was undertaken at the village level.

Thus, as of the month of April, we insisted that each department step up surveillance of critical areas. The traditional areas of infestation form a strip from the north of Tillabery to the north of Filingue, Tahoua, Dakoro, Tanout, Aguie, N'Guigmi.

[Question] What are the means at hand?

[Answer] There already exists a certain availability of chemicals in each department. But we have added to equipment by sending 100 portable motorized machines to all the departments of Niamey, 50 to Dosso, 125 to Tahoua, 100 to Maradi, 50 to Zinder, 25 to Diffa and 25 to Agadez. As for battery-powered machines, Niamey received 50, Dosso 60, Tahoua 50, Maradi 30, Zinger 40 Diffa 15, and Agadez 10.

For all departments combined, we supplied 73,500 metric tons of chemicals in powder form and 3,400 liters of liquid chemicals, thus augmenting their exist-supplies.

In addition to distributions of chemicals and equipment, there was a training program for village task forces. In several villages, farmers were trained in the techniques of combatting the enemies of their crops. They are taught to use the treatment equipment and the chemicals, to recognize the insects and to provide early warning: 499 crop protection task forces made up of a total of 3,283 farmers across the country were trained this year. The campaign will be successful particularly with the help of notification of the first signs of larvae formation. This is why we highly stress that farmers effectively participate in the notification and treatment operations. If the attack is a very broad one exceeding the means of the arrondissement and the department, we will intervene at the national level, using airplanes.

[Question] There are traditional methods as well?

[Answer] With regard to grasshoppers, these methods do not have a great impact perhaps. But the traditional "Kornaka method" is very effective on rats, for example.

Incidentally, we are somewhat worried about the jerboas, that is to say rats that have been observed in the departments of Tahoua, Maradi and Zinder. We have recommended the Kornaka method against these rats which are particularly harmful to dry seedlings.

[Question] Are the means at hand sufficient to check any attack by grasshoppers?

[Answer] If we have to take action against a widespread attack, we will have to augment our ground treatment means above all. We must be able to provide enough insecticide to all of the task forces.

[Question] To conclude, how do you forsee this season? Are you optimistic or pessimistic in view of all the threats confronting the countries of the Sahel?

[Answer] The threats are real. The grasshopper situation may get out of hand this season.

As for locusts, there have already been attacks in East Africa and in South Africa.

The threats therefore exist and it all depends on the course the season will take. If conditions are favorable to the insects' development, it is certain we will be confronted with risks. Faced with this situation, we have taken steps primarily in the direction of raising awareness concerning early warning and of supplying chemicals. We believe we will receive more insecticide, particularly at the international level. We hope that international aid will arrive in time, between now and June at the latest. We will conduct awareness campaigns by radio with broadcasts on the grasshopper problem because combatting them requires the participation of all.

We intend to establish--for the first time--a committee to monitor and coordinate the crop protection situation across the entire country. This committee will see to the gathering of information and will make regular visits to the different departments so as to be well informed on the status of the outbreaks.

12413
CSO: 5400/152

## BRIEFS

LOCUST ALERT IN VICTORIA--Victoria--Agriculture and health official yesterday raised a locust alert in Victoria after it was established that an unknown number of the pests may have arrived in the country, this week, aboard a cargo ship from Djibouti. Stevedores working aboard the ship "Ville de Strasbourg" recognized a few locusts from a programme shown on Seychelles television the week before and set about killing any that they came across. An environmental health official has said it was not known how many of the locusts might have made it ashore. He called on the public to kill any locusts they may see. [Text] [Addis Ababa THE ETHIOPIAN HERALD in English 11 Jul 86 p 6] /9274

CSO: 5400/162

## LOCUSTS EXPECTED IN REEF

Johannesburg THE STAR in English 22 Jul 86 p 8

[Article by Hannes deWet]

[Text]

Locust-combating officials are bracing themselves for the worst locust outbreak in years this spring.

It could be much worse than the plague earlier this year, say experts.

Even the Reef could be the scene of dark locust swarms eating everything in their path, said Mr Isak Venter, deputy director for soil protection at the Departement of Agricultural Economics and Marketing.

### BLOWN BY WIND

An indication of what was to come, Mr Venter said, was the fact that there were at present several locust swarms in the country despite the cold.

They were concentrated in the Western and North-Western Transvaal, the Free State and the Northern Cape.

These locusts were coming from Botswana, said Mr Venter.

"They are coming from an easterly direction over Ellisras, Thabazimbi and Zeerust. The locusts' movements depend entirely on wind direction, which means that we could also get swarms on the Reef."

Mr Venter said he was in Botswana about two weeks ago and saw several swarms at the hopper stage.

"They are evidently moving across our border as soon as they reach the flying stage."

The numbers of the locusts would increase dramatically once spring arrived.

"Millions of eggs laid within our borders earlier this year will hatch and we could have the largest outbreak in years in our hands.

"We are preparing ourselves for the worst and are equipping ourselves with spraying pumps and locust poison," Mr Venter said.

/9274
CSO: 5400/162

## 'PIONEERING' EXPERIMENT TO CONTROL FOREST PEST DELAYED

Edinburgh THE SCOTSMAN in English 30 Jun 86 p 7

[Article by Brian Pendraigh]

[Text]

Plans to make Scotland the setting for a pioneering experiment with a genetically engineered virus in the wild have been delayed.

The experiment, which is aimed at improving pest control in forests, has been postponed until late summer at the earliest and probably will not take place until next year.

It was scheduled to begin about now but the laboratory tests at Oxford's Institute of Virology have not yet been completed, hence the postponement.

The virus has been sprayed on the pine beauty moth caterpillars in the past. The institute wants to "improve" the virus so that it will kill the caterpillars quicker and therefore reduce the damage they do.

The moth lived on Scots pine for years without causing problems but in 1976 it was responsible for the destruction of 400,000 newly introduced lodgepole pines in Sutherland, the worst destruction by any forest pest in Britain.

Since then the Forestry Commission has had a constant battle with the caterpillars over their lodgepole diet. They caused major destruction again last year.

The first stage towards the creation of a supervirus is to introduce a genetic "marker" into the virus. Dr David Bishop, director of the Institute of Virology, explained that it was a simple matter to alter slightly the make-up of the virus so that its spread in the environment could be monitored.

The plan is to release caterpillars infected with the altered virus onto 100 trees in the Shin Forest in Sutherland. "The marker causes no change in virus capabilities."

The next step is to shorten the lifespan of the virus, so that it would die soon after it had killed the caterpillars. The third step is to shorten the length of time it takes to kill the caterpillars, by making it more toxic. Dr Bishop said that while the virus is working on the caterpillar, the caterpillar continues too munch away at the trees.

However some people are less than overjoyed at Dr Bishop's pioneering work. "It is not possible to foresee the consequence of genetically-manipulated organisms," Mr Rolf Kamphausen of the German Greens told *The Scotsman*. He is a member of the party's working group on genetic engineering.

"Do they know enough about the spreading of the virus in the environment? I think they do not because they want to test it. It might be that this new virus would spread all over Britain."

His colleague, Ms Paula Bradish, said: "We cannot say before what will happen after." Dr Bishop said: "We see no risk with the use of the virus. It affects a very limited group of related moths."

Mr Kamphausen and Ms Bradish accepted that it was an extremely specialised virus and was unlikely to affect other animals. "But no-one can say for definite," said Ms Bradish.

Mr Ian Smith, prospective parliamentary candidate for the Scottish Green Party in Midlothian, said: "We are a bit miffed about Scotland being used again as an experimental ground.

"These strains do not look particularly dangerous to man. But it is the thin edge of the wedge. These things are happening without any public debate. The public are not aware of it."

Genetic engineering is the control of the nature of an organism, including man, by altering its biological make-up. Scientists are currently discussing genetically-engineered micro-organisms to convert grain to fuel and to detoxify industrial waste.

/12828
CSO: 5440/100

## NOTICE ISSUED ON RICE PESTS, ERADICATION MEASURES

OW200936 Hanoi Domestic Service in Vietnamese 1100 GMT 19 Jul 86

[Text] According to a notice from the Vegetation Protection Department, the summer-fall and 10th-month rice crops in various provinces are being ravaged by paddy borers, rice thrips, brown plant hoppers, white rice leaf hoppers, rice bugs, rice hispa, and rice army worms. In particular, paddy borers have damaged about 150,000 hectares of summer-fall and early 10th-month rice crops. Nghe Tinh and Binh Tri Thien Provinces have sustained the most serious damage. In central Vietnam's coastal provinces, the number of rice fields ravaged by insects has reached 10 percent. The average density is from 15-20 insects per square meter, whereas the highest density is 40.

Leaf folders have ravaged about 20,000 hectares of tillering summer-fall rice plants in Long An, An Giang, Hau Giang, Tien Giang, and Dong Thap provinces. Brown plant hoppers and white rice leaf hoppers are currently developing in vast areas in the southern provinces.

The northern provinces are currently eradicating rice hispa, stem borers, and brown planthoppers, which have ravaged rice seelings, and are striving to prevent these insects from spreading to the nearly 10th-month rice crop.

According to the Vegetation Protection Department's forecast, butterflies coming from stem borers will develop uniformly by mid-August and will cause silver-leaf disease in summer-fall and early 10th-month rice crops in the northern provinces. Butterflies coming from paddy borers will appear uniformly by the end of July and in early August and will cause silver-leaf disease to the rice in boot or in the ear during this period.

In the Mekong Delta provinces rice case worns will develop and ravage rice crops broadly, especially the early summer-fall rice, in areas where intensive cultivation is practiced. Moreover, brown plant hoppers, white rice leaf hoppers, nigrospora oryzae, and rice hispa will continue to develop and will cause some damage.

To minimize the damge caused by rice pests during the 10th-month crop season and eradicate all sources of harmful insects, the northern provinces should concentrate on pruning the withered leaves of summer-fall and 10th-month rice plants that were transplanted before 5 July. Meanwhile, the southern provinces should spray insecticides to exterminate lead folders when they appear uniformly and strive to promptly detect pockets of brown plant hoppers and white rice leaf hoppers in order to eradicate them neatly and prevent them from spreading.

/9274
CSO: 5400/4395

- END -

JPRS-TEP-86-019

25 AUGUST 1986

## Worldwide Report

# EPIDEMIOLOGY

**FBIS** FOREIGN BROADCAST INFORMATION SERVICE

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JPRS-TEP-86-019

25 AUGUST 1986

# WORLDWIDE REPORT

## EPIDEMIOLOGY

## CONTENTS

### HUMAN DISEASES

AFGHANISTAN

State To Intensify Campaign Against Malaria
(Kabul KABUL NEW TIMES, 10 Jul 86)............................ 1

BELGIUM

Malaria Strikes Customs Officials at Brussels Airport
(Brussels LE SOIR, 4 Jul 86)................................ 3

Preventive Measures at Airport, by Alain Guillaume 3
Comments by Medical Expert, Jean Sonnet Interview 4

BERMUDA

Minister of Health Reports on AIDS Situation
(Hamilton THE ROYAL GAZETTE, 5 Jul 86)....................... 6

BRAZIL

Malaria Incidence, Efforts To Eradicate Carrier Discussed
(Sao Paulo O ESTADO DE SAO PAULO, 23 Jul 86).................. 7

Briefs

Polio Incidence on Rise 8
Meningitis in Paraiba 8
Polio Cases Detected 9

INDIA

Polio Reported Spreading Fast in Aurangabad (Bombay THE TIMES OF INDIA, 13 Jul 86)........................ 10

Suspected AIDS Patient Back in Hyderabad (Bombay THE TIMES OF INDIA, 7 Jul 86)........................ 12

Briefs

Conjunctivitis Epidemic 13
First Against Malaria 13
Cholera-Affected Area 13
Cholera in Gujarat 13

MALAYSIA

Briefs

Dengue Fever Figures 14

MONTSERRAT

Briefs

Viral Hepatitis Outbreak 15

NETHERLANDS

Incidence of AIDS Rising Rapidly (Rotterdam NRC HANDELSBLAD, 9 Jul 86)........................ 16

NICARAGUA

Health Ministry Notes Spread of Contagious Diseases (Managua BARRICADA, 12 Jul 86)................................ 18

Dengue Statistics 18
Health Alert in Leon, by Noel Mendoza 18

PEOPLE'S REPUBLIC OF CHINA

Hepatitis A Virus Causing Cytopathic Effects Isolated (Wu Shen, et al.; Beijing CHINESE MEDICAL JOURNAL, No 5, May 86)........................................................ 20

Infection of Legionella Pneumophila (Liu Shuiqu, et al.; Beijing CHINESE MEDICAL JOURNAL, No 5, May 86).................................................. 26

China Claims 3 Major Diseases Controlled Using Trace Elements (Ye Dingbong; Beijing CHINA DAILY, 5 Aug 86).................. 32

Tianjin Virology Seminar Records Successes
(Beijing XINHUA, 23 Jul 86)................................ 34

Improvement Urged in Rural Medical Care
(Beijing XINHUA, 12 Jul 86)................................ 35

Briefs
Guangdong 'Para-Cholera' Cases 36
Prevention of Endemic Disease 36

POLAND

Geographic Patterns in Mortality, Hospital Morbidity Analyzed
(M. Wysocki; Krakow PREZEGLAD LEKARSKI, No 3, Mar 86)........ 37

UNITED KINGDOM

Briefs
Rise in Whooping Cough 45

ZIMBABWE

Local Berry May Eradicate Bilharzia
(Gweru MOTO, No 46 [no date given] )......................... 46

PLANT DISEASES AND INSECT PESTS

VIETNAM

Measures To Protect 10th Month Rice Discussed
(Nguyen Quang Tho; Hanoi NHAN DAN, 16 Jun 86)............... 48

Country Warned of Rice Crop Insect Outbreak
(Hanoi Domestic Service, 31 Jul 86)......................... 51

Briefs
Mekong Delta Pest Control 52

/6539

## AFGHANISTAN

### STATE TO INTENSIFY CAMPAIGN AGAINST MALARIA

Kabul KABUL NEW TIMES in English 10 Jul 86 p 4

[Text]

**The Institute for campaign against malaria and for parasitology, has checked and treated during 15 months over 333,000 patients affected by malaria, leishmaniasis and intestinal diseases.**

**According to the policy of the DRA state on rendering free health services to the citizens, the institute carries out through its different departments free supply of medicines, laboratory check up and treatment of patients affected by the above diseases.**

**All the city policlinics, hospitals, armed force policlinics, education health centres, family guidence associations all over the country are furnished with the malaria and parasitology laboratories. Seven such laboratories were newly opened and are functioning in Kabul city. Presently, 203 laboratories are functioning all over the country.**

**The institute, in the first quarter of the current Afghan year in its campaign against anopheles mosquitos over an area of 2,475,500 square metres of water logged marshy areas sprayed 55 litres of abit, 830 litres of mobile oil, and spread 300,000 gambosia fish and filled 40,000 cubic metres of marshy pits with soil.**

**Research was also carried out on two species of bacilli in the water at a depth of 1-100 metres. The bacilli will be used to inhibit the larval stage of anopheles mosquitos.**

**Malaria occurs in Khost division and Kunduz, Badakhshan, Takhar, Nangarhar, Laghman, Konarha, Kandahar and Helmand provinces, and leishmaniasis is prevalent in Herat, Kandahar Kabul, Kapisa provinces and Mazar-i-Sharif and Aqcha cities.**

**Due to geographical, climatic and unhygienic condition intestinal parasitic diseases are prevalent throughout the country.**

**The institute for campaigning against malaria, and parasitology during the first quarter of the current year had held four training courses of five weeks duration in the centre and provinces of the country for further education of its personnels. The trainees were taught by Afghan and foreign experts.**

**For improvement of activity and drafting of the operative plan for the control of the above mentioned diseases in the country, a seminar of regional directors and related units was held for a week. Similarly, the institute for training its 22 techn-**

icians held a six weeks course in the first quarter of the current year.

The institute besides carrying on effective work in the centre has also organised its activity in the provinces through 8 zones and 33 units to fight malaria, leishmaniasis and intestinal diseases.

With the help of experts from the Soviet Union and WHO the institute has drafted plans for the HS 1365 and 1366. In these plans emphasis has been laid that the personnel of the institute should as the first step provide necessary medicines for treatment of disease to the people. The programme is some what fulfilled.

The institute is planning to urgently apply necessary measures all over the country for treatment of positive casese, anti-larva activity and spraying operation against disease transmission. It is also proposed to increase the activity of the institute all over the country by the end of HS 1369.

WHO and UNICEF, have permanent cooperation with the Institute. The UNICEF recently donated one million chloroquine tablets to the Institute.

/12828
CSO: 4600/427

## BELGIUM

# MALARIA STRIKES CUSTOMS OFFICIALS AT BRUSSELS AIRPORT

## Preventive Measures at Airport

Brussels LE SOIR in French 4 Jul 86 p 3

[Article by Alain Guillaume]

[Text] Wednesday afternoon, Secretary of State for Public Health Wivina Demeester released an official communique reporting that the condition of the four customs officials who contracted malaria in recent days "is developing favorably." Even the patient whose illness worried doctors seems to be recovering gradually.

And what is being done for others? They are being asked to submit to tests in Antwerp (to date, nothing worrisome has been discovered), and the procedures for disinfecting the baggage compartments of planes and certain working premises are being improved.

An astonished worker at the Zaventem site caught a mosquito yesterday morning and put it in the refrigerator. A humorous as well as a curious man, the hunter then called one of his bosses. "When a plane is in flight, the temperature in the baggage compartments is 20 degrees at most, right? And that's too cold for mosquito? Well, boss, have a look in my refrigerator." "Its a fact," his boss replied, "your mosquito is alive, but it's doubtless because it's a Belgian mosquito and it doesn't have malaria!"

Apart from jokes of this nature—a single mosquito bite at Brussels National now produces a number of near fainting spells--no one can forget that a man died of malaria over the weekend. Even though the "disinfectant agents" are met with protests of "No, not again? That thing of yours stinks...," everyone remembers that the trade union representatives have for a longtime been reporting "an intolerable lack of sanitary measures observed in numerous customs locations" to the Ministry.

Nonetheless, on Wednesday, the "mosquito busters"--the disinfecting agents of the Saniport (a public health department), and those employed by the private freight companies--covered the whole of the airport, well supplied with their little spray cans (containing a "special airport" mixture of 2 percent D-phenotrim and 98 percent freon).

Since 1958, sprays of this type have been used to disinfect the cabins of aircraft arriving from zones in which "malaria-carrying mosquitoes" and cockroaches of all sorts proliferate. If they are properly used, these sprays prevent the planes from becoming breeding environments for the harmful anopheles. And what about the baggage compartments? In theory, the insects cannot survive the cold there. But only "in theory." Thus since yesterday, three or four "minispray" cans have been emptied into every airplane hold before unloading, with care being taken to prevent the gas from contaminating foodstuffs.

And what about the hangars? They are so large and so well ventilated that, it is said, it is impossible--and doubtless futile--to try to disinfect them. Offices, on the other hand, are now being "gassed" as needed, or in other words, especially if packages are opened there to display the contents to customs officials.

Is this enough? No one is really sure, but on the other hand, the picture of these "health officers" patrolling the cabins and the baggage holds, Flytox in hand, does indeed have a worrisome old-fashioned aspect.

## Comments by Medical Expert

Brussels LE SOIR in French 4 Jul 86 p 1

[Interview with UCL Professor Jean Sonnet by Jacques Poncin; date and place not given]

[Question] Professor, on learning that five customs agents in Zaventem had contracted malaria, the public came to realize, in a way, that tropical diseases do exist.

[Answer] Indeed yes, they exist, and they are more widespread than is commonly thought. And even in our country, as it is not at all rare for a hospital to admit patients suffering from malarial fever. This is the logical consequence of the many trips we make routinely, thanks to air travel, to regions infected by this parasite.

[Question] But isn't transmission by a mosquito transported by airplane a rarer occurrence, all the same?

[Answer] Without a doubt. But this is not a unique case. There have been others reported in the scientific literature. There was a case in Schiphol, one in Geneva, and another in Zaventem, but in this instance the mosquito left the airport area and bit an individual in a neighboring village. However, for this to happen the sultry heat we are experiencing now is necessary. Otherwise, a mosquito cannot survive.

[Question] Could these five cases mean the beginning of an epidemic in Belgium?

[Answer] Certainly not! This type of mosquito cannot survive long in our country.

[Question] However, it was not so long ago that malaria was endemic here.

[Answer] Precisely, but this was quite a different parasite, because our native mosquitoes cannot carry this parasite of tropical origin. No, in this connection, the public at large should be greatly reassured. There will not be a malaria epidemic in Belgium tomorrow.

[Question] One of the customs agents died of the disease. Is it conceivable that still, in our day, one can die of malaria?

[Answer] The greatest problem lies in the difficulty of diagnosing this disease properly and speedily. The symptoms are rather extreme fever, headaches, digestive problems, in short, nothing really exclusive. And in addition, our doctors see the disease so rarely that they are not trained to recognize it. Sometimes at university institutions it even takes several days to reach the proper diagnosis and begin the appropriate treatment. This may perhaps explain the tragic case of this customs agent.

[Question] Doubtless one thinks of this possibility more readily when the patient has just returned from a tropical country?

[Answer] That is true. And this leads me to remind those returning from such countries to watch for any fever and to be sure to mention to their doctors that an attack of malaria might be a possibility.

[Question] But isn't malaria mainly a Third World plague?

[Answer] It affects Central Africa in particular. I will mention just one figure which I happen to remember at the moment. A recent study showed that one out of every three young persons 15 years of age in Kinshasa carries this notorious parasite, suffers at least periodically from this disease, and is likely to ensure its propagation, with the complicity of certain mosquitoes.

[Question] Have campaigns to eradicate the mosquitoes and parasites failed, then?

[Answer] In fact they have. And in these countries, a certain discouragement, in view of the scope of the problem, prevails.

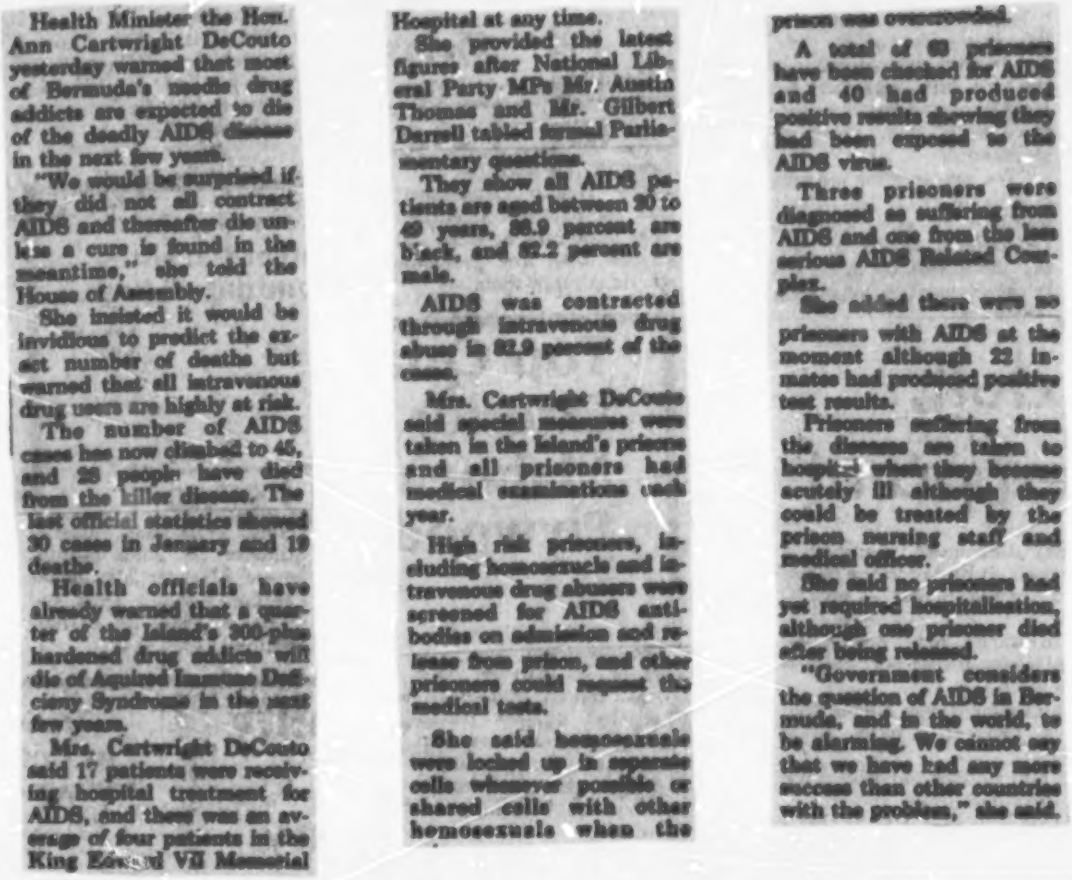
5157
CSO:5400/2548

BERMUDA

## MINISTER OF HEALTH REPORTS ON AIDS SITUATION

Hamilton THE ROYAL GAZETTE in English 5 Jul 86 p 1

[Text]



Health Minister the Hon. Ann Cartwright DeCouto yesterday warned that most of Bermuda's needle drug addicts are expected to die of the deadly AIDS disease in the next few years.

"We would be surprised if they did not all contract AIDS and thereafter die unless a cure is found in the meantime," she told the House of Assembly.

She insisted it would be invidious to predict the exact number of deaths but warned that all intravenous drug users are highly at risk.

The number of AIDS cases has now climbed to 45, and 28 people have died from the killer disease. The last official statistics showed 30 cases in January and 19 deaths.

Health officials have already warned that a quarter of the Island's 300-plus hardened drug addicts will die of Acquired Immune Deficiency Syndrome in the next few years.

Mrs. Cartwright DeCouto said 17 patients were receiving hospital treatment for AIDS, and there was an average of four patients in the King Edward VII Memorial Hospital at any time.

She provided the latest figures after National Liberal Party MPs Mr. Austin Thomas and Mr. Gilbert Darrell tabled formal Parliamentary questions.

They show all AIDS patients are aged between 20 to 49 years, 88.9 percent are black, and 82.2 percent are male.

AIDS was contracted through intravenous drug abuse in 82.9 percent of the cases.

Mrs. Cartwright DeCouto said special measures were taken in the Island's prisons and all prisoners had medical examinations each year.

High risk prisoners, including homosexuals and intravenous drug abusers were screened for AIDS antibodies on admission and release from prison, and other prisoners could request the medical tests.

She said homosexuals were locked up in separate cells whenever possible or shared cells with other homosexuals when the prison was overcrowded.

A total of 60 prisoners have been checked for AIDS and 40 had produced positive results showing they had been exposed to the AIDS virus.

Three prisoners were diagnosed as suffering from AIDS and one from the less serious AIDS Related Complex.

She added there were no prisoners with AIDS at the moment although 22 inmates had produced positive test results.

Prisoners suffering from the disease are taken to hospital when they become acutely ill although they could be treated by the prison nursing staff and medical officer.

She said no prisoners had yet required hospitalisation, although one prisoner died after being released.

"Government considers the question of AIDS in Bermuda, and in the world, to be alarming. We cannot say that we have had any more success than other countries with the problem," she said.

/9317
CSO: 5440/105

## BRAZIL

### MALARIA INCIDENCE, EFFORTS TO ERADICATE CARRIER DISCUSSED

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 23 Jul 86 p 10

[Text] Sao Paulo now has 1,800 cases of malaria, which is also affecting western Parana, where 2,000 people are infested. This was reported yesterday in Rio by Health Minister Roberto Santos, when he announced the emergency and preventive measures which are being taken nationwide for the eradication and control of the mosquitoes which transmit diseases.

The presence of the Aedes Albapictus, better known as the "Asian tiger," for example, has already begun to be alarming. A possible carrier of dengue fever, encephalitis and yellow fever, the mosquito has already affected 7 municipios in Rio de Janeiro State, 12 in Minas Gerais and 37 in Espirito Santos, where it is presenting a major concentration, leading to the conclusion that it entered Brazil through the port of Vitoria.

According to Roberto Santos, to date (and since last April), the Health Ministry has already spent about 20 million cruzados to combat the Aedes Aegyptus mosquito in Rio de Janeiro alone, where it is now under control. From the 700 cases a week in April and May, the number has now declined to 40 cases registered officially last week. The minister vehemently denied that there were cases of urban yellow fever in Rio and Sao Paulo, but he did not hide his concern about the "very troubling" increase of dengue fever in other regions of the country, such as Maceio, which has recorded 70,000 cases of infection in the last 60 days. In all, Brazil has 470,000 registered cases of dengue, 400,000 of which are in Rio de Janeiro alone.

Despite the swift injection of funds (the national plan for the simultaneous eradication of Aedes Aegypti and Aedes Albapictus will cost about 500 million cruzados in the initial phase), the problem will not be solved just with more money and more sanitarians. The health minister believes that the program to eradicate the carrier monquitoes must be conducted in conjunction with ministries and public organs linked to various sectors of the nation's life.

6362
CSO: 5400/2076

## BRAZIL

### BRIEFS

**POLIO INCIDENCE ON RISE**--Poliomyelitis has already reached epidemic proportions in the Northeast and is spreading in alarming fashion in the other Brazilian states, because the public is no longer mobilized to respond to the eradication campaigns. This was admitted by Joao Batista Rizze Jr, national secretary for basic actions, of the Ministry of Health, in a lecture presented yesterday to employees of the Rio de Janeiro State Secretariat of Health, who will participate in the second stage of this year's campaign, on 16 August. According to Rizze, the public has been lulled by the decline in the number of cases (this is the 7th year in which campaigns have been conducted) and is not participating as actively, forgetting that 4 million children are born every year in this country, all of whom could catch the disease. To give some idea of the declining participation, in the first phase of immunization this year, on 14 July, about 86 percent of the 19 million children who constituted the target population were reached (this is a partial figure), whereas the ideal would be 90 percent. The Northeast presents the most serious picture, where 122 of the 148 cases of poliomyelitis confirmed this year were located. During 1985, there were 170 confirmed cases in the country, whereas this year, in addition to the 148 confirmed cases, another 401 cases have been reported and are awaiting confirmation. Of these, 275 cases are probable and 126 are suspected. In the Northeast, where 70 percent of the cases are located, the rate of coverage [for immunization] is between 50 percent and 70 percent, whereas the ideal is 90 percent. According to Rizze, the incidence has been increasing since 1984, since poliomyelitis is transmitted very rapidly. "When 1 percent of the infant population presents the symptom of paralysis, this means that thousands of people have been infected, although they do not manifest the specific symptom of the disease, which is the debilitation," Rizze said. The Health Ministry's national secretary for basic action reminded that a single dose of the vaccine does not immunize a child; three doses are required, or more, if necessary. [Text] [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 22 Jul 86 p 12] 6362

**MENINGITIS IN PARAIBA**--Joao Pessoa--Yesterday, in the Federal University Hospital of Paraiba, meningitis took the life of its third victim in the locale of Carnauba (165 kilometers from Joao Pessoa, in Araruna Municipio), where eight meningitis cases have been clinically confirmed in just 15 days. Informed of this, the Health Ministry advised the Paraiba Health Secretariat to conduct laboratory examinations to identify the type of meningococcus and authorized mass vaccinations in the region, if the disease continues to spread. Physician Jose Iordan Sa Pires, general coordinator of health campaigns in the state government, said the recorded cases were cause for concern, but that they are restricted to a small area and thus do not yet constitute an epidemic. The last national vaccination campaign against meningitis was conducted 8 years ago. [Text] [Rio de Janeiro O GLOBO in Portuguese 11 Jul 86 p 6] 6362

POLIO CASES DETECTED--The Health Ministry has confirmed that out of 145 cases of polio reported during the first 5 months of this year throughout the country, 122 cases were found in the northeast. Joao Batista Risi, national secretary for prevention and education in the Health Ministry, said that the main reason for this increase in the number of polio cases in the country is that many children have not been vaccinated, or have received only one dose of the vaccine. Risi recommended that the parents of children under 5 have them vaccinated during the next vaccination campaign set for 6 August. During this campaign, the vaccines used will be slightly modified to more effectively combat the type 3 polio virus, which has been detected mostly in the northeastern region, in the states of Sergipe and Paraiba. [Summary] [Brasilia Radio Nacional da Amazonia Network in Portuguese 1000 GMT 23 Jul 86 PY] /8309

CSO: 5400/2077

INDIA

# POLIO REPORTED SPREADING FAST IN AURANGABAD

Bombay THE TIMES OF INDIA in English 13 Jul 86 p 6

[Text] Aurangabad, July 12 (UNI)--Health officials of the Aurangabad medical college hospital, Zilla parishad and the municipal corporation at a special meeting here yesterday undertook preventive measures on a war-footing to check the fast-spreading polio disease in the district.

The medical college hospital dean, Mr A.M. Vare, said that hundreds of polio cases have been reported from different government health centres and private clinics in the district. Nine people have died within ten days in the hospital and 35 have been under treatment.

Dr Vare said the child patients admitted to different hospitals were under six years.

The number of patients below three years were more.

Dr Vare said a special team of doctors was set up and sent to different localities to trace polio patients and administer vaccines.

## Filthy Atmosphere

He said, "we have instructed private medical practitioners and doctors on preventive measures and treatment. The medicos were advised not to give any injection to patients suffering from the disease."

It was also decided to create awareness about polio among people through newspaper advertisements and handbills, he said.

The dreaded child disease spreads mainly because of impure water and dirty atmosphere surrounding the locality and therefore, "we are concentrating on keeping the locality clean," he said.

Last month 65 patients were admitted to the hospital. Twelve of them died.

In 1984, 102 polio patients were admitted and only two died.

Last year 60 patients were admitted and two died. So far this year, 165 patients were admitted and about 20 died.

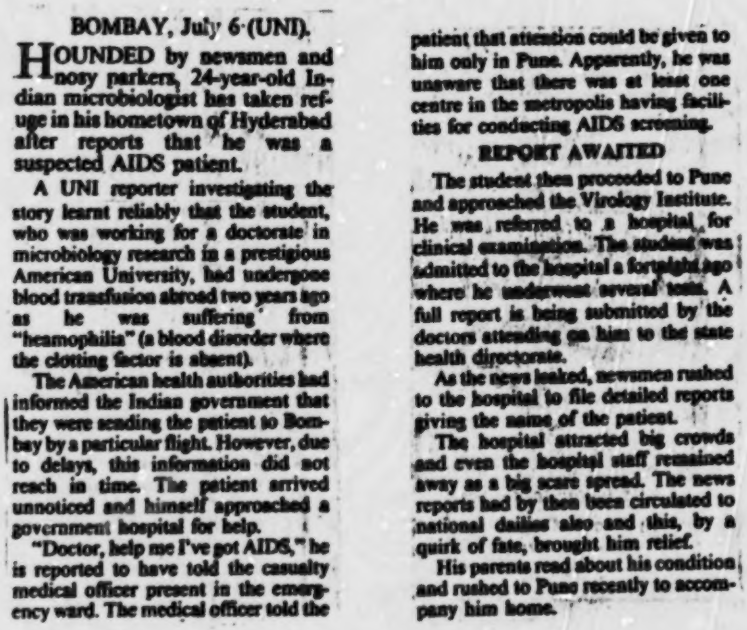
Anti-polio vaccine centres have been opened by a social organisation and some doctors in the city have agreed to give anti-polio doses free of cost.

/9317
CSO: 5440/108

## SUSPECTED AIDS PATIENT BACK IN HYDERABAD

Bombay THE TIMES OF INDIA in English 7 Jul 86 p 12

[Text]



BOMBAY, July 6 (UNI).

HOUNDED by newsmen and nosy parkers, 24-year-old Indian microbiologist has taken refuge in his hometown of Hyderabad after reports that he was a suspected AIDS patient.

A UNI reporter investigating the story learnt reliably that the student, who was working for a doctorate in microbiology research in a prestigious American University, had undergone blood transfusion abroad two years ago as he was suffering from "heamophilia" (a blood disorder where the clotting factor is absent).

The American health authorities had informed the Indian government that they were sending the patient to Bombay by a particular flight. However, due to delays, this information did not reach in time. The patient arrived unnoticed and himself approached a government hospital for help.

"Doctor, help me I've got AIDS," he is reported to have told the casualty medical officer present in the emergency ward. The medical officer told the patient that attention could be given to him only in Pune. Apparently, he was unaware that there was at least one centre in the metropolis having facilities for conducting AIDS screening.

### REPORT AWAITED

The student then proceeded to Pune and approached the Virology Institute. He was referred to a hospital for clinical examination. The student was admitted to the hospital a fortnight ago where he underwent several tests. A full report is being submitted by the doctors attending on him to the state health directorate.

As the news leaked, newsmen rushed to the hospital to file detailed reports giving the name of the patient.

The hospital attracted big crowds and even the hospital staff remained away as a big scare spread. The news reports had by then been circulated to national dailies also and this, by a quirk of fate, brought him relief.

His parents read about his condition and rushed to Pune recently to accompany him home.

/9317
CSO: 5440/0181

## BRIEFS

CONJUNCTIVITIS EPIDEMIC--Calcutta, July 14--More than 40,000 cases of conjunctivitis have been reported from the Burrabazar area of the city, Mr Shyam Sundar Goenka, BJP councillor, claimed today. He alleged that the Calcutta Municipal Corporation (CMD) was not doing anything about it. The CMC health authorities however, claimed that they were not aware of such a large outbreak. [Text] [Calcutta THE TELEGRAPH in English 15 Jul 86 p 2] /9317

FIGHT AGAINST MALARIA--Shillong, July 12 (UNI)--An Integrated Vector Control Centre (IVCC) is being set up at Sonapur in Kamrup district of Assam to arrest the resurgence of Malaria in many parts of the State during the past three months. The disease which broke out in near epidemic form in the State, particularly in Nalbari and Darang districts, has in the past three months claimed 148 lives. The centre, to be manned by senior research officers and malariologists, will specifically study and monitor the falciparum's resistance to chloroquine and determine the causes of increase in falciparum malaria. [Text] [New Delhi PATRIOT in English 13 Jul 86 p 5] /9317

CHOLERA-AFFECTED AREA--Nasik, July 11--The collector, Mr Dinkarrao Patil, has declared the district as cholera-affected for six months and appointed special cholera control officers for the rural and urban areas, respectively. According to Mr Patil, some cases of cholera were detected in Malegaon taluka where four persons have died of gastro-enteritis. A few cases of gastro-enteritis have been reported in Surgana taluka. The collector said that the administrator of the Nasik municipal corporation would function as cholera control officer during the period. [Text] [Bombay THE TIMES OF INDIA in English 12 Jul 86 p 7] /9317

CHOLERA IN GUJARAT--Broach, July 10 (UNI)--The Broach district collector has declared Chhod village as cholera-affected as the entire Amod taluka was threatened by the epidemic. An official statement said here that the mamlatdar of Amod taluka had been appointed as cholera controlling officer. [Text] [Bombay THE TIMES OF INDIA in English 11 Jul 86 p 6] /9317

CSO: 5450/0183

## BRIEFS

**DENGUE FEVER FIGURES**--Six cases of dengue fever, including one dengue hemorrhagic case were reported in Perak on 31 July, bringing the total number this year to 160 thus far. A state health official disclosed that a 7-year-old boy had been suspected of contracting hemorrhagic fever in Taiping. [Summary] [Kuala Lumpur Domestic Service in Malay 1230 GMT 1 Aug 86 BK] /9738

CSO: 5400/4401

## BRIEFS

VIRAL HEPATITIS OUTBREAK--There has been an increase in the number of cases of jaundice during the last four months, presumed to be an epidemic of infectious viral hepatitis. To date twenty five cases have been reported, most of them children between the ages of 5 and 15. Most patients are in the Northern area around the St John's area. No definite epidemeological pattern has emerged, and we are unable to identify the origin of the outbreak. Spread has been mainly through family contacts and contacts at school. Treatment consists mainly of bed rest, nutritional supplements with vitamins and high calorie foods and specific treatments. Two samples of blood are taken two weeks apart, and sent to CAREC in Trinidad for analysis. Most important is the isolation of identified cases, to control the spread of the virus. Children are to be kept away from school while they are infectious. The advice has not been taken by many families. Advice is also given on normal hygiene methods which are the first and most important aspects of control. [Excerpts] [Plymouth THE MONTSERRAT REPORTER in English 16 May 86 p 8] /9317

CSO: 5440/107

## INCIDENCE OF AIDS RISING RAPIDLY

Rotterdam NRC HANDELSBLAD in Dutch 9 Jul 86 p 2

[Report: "148 AIDS Patients in Netherlands—Almost Doubles Annually"]

[Text] Amsterdam 9 Jul--According to the most recent figures the Netherlands now has 148 AIDS patients, as compared to 120 on 1 April; an increase of 28 patients in 3 months. This development means a doubling in about 11 months, a trend which parallels findings in other countries.

However, that must not be a reason for complacency says Joop van Wijngaarden, the regional policy coordinator for AIDS. "Those 148 patients are actually just the tip of the iceberg. It is not at all clear how many people will get ill among the great number of people that are infected, especially homosexual men. The research of the past years and months have indicated that the number of infected people who in fact become ill is higher than the 10 percent which was initially used and which turned out to be much too optimistic. As the years pass, the possible incubation period of the disease appears to become longer and longer; on the basis of findings with transfusion blood it is now already put at an average of 5 years. That means that someone who gets an infection now and is not bothered by it at all might still become an AIDS patient 5 years from now. It also means that there is a greater group of potential patients," according to Van Wijngaarden.

The only answer which can be given to that at this time is: arrange for as effective as possible prevention, so that the progress of the disease is slowed down. At this moment that is still quite possible, as long as the percentage of infected male homosexuals is still below a certain level. How high that percentage is difficult to say, certainly on the national level. A random sample in Amsterdam came to 30 percent, but that is certainly not representative of the entire homosexual population. "This percentage must remain as low as possible; if it increases too much, prevention is no longer possible," says Van Wijngaarden.

The policy of the government is also important in this context: the increase in the funds expended for AIDS, not even considering patient care, might conflict with plans for economizing on public health. Van Wijngaarden: "I wonder whether sufficient thought is being given to the fact that an exponential growth in the number of AIDS patients in the future will require many times the amounts which now must be expended for prevention. I hope that sufficient priority will be given to this, over and above the issues which are important in the short term, and that a structural post for AIDS will be included in the '87 public health budget. The 2 million guilders by which the post of Sexually Transmittable Afflictions was increased in the '86 budget on behalf of the fight against AIDS will certainly not be adequate in the future."

8700
CSO: 5400/2549

# HEALTH MINISTRY NOTES SPREAD OF CONTAGIOUS DISEASES

## Dengue Statistics

Managua BARRICADA in Spanish 12 Jul 86 p 1

[Text] The MINSA [Ministry of Health] has warned the Nicaraguan population about an increase in five infectious-contagious diseases. Meanwhile, in the city of Leon, a general alert has been declared because of a rise in the incidence of diarrhea.

The diseases included in this alert are: diarrhea, meningitis, measles, dengue, malaria, rubella, and rabies. To date the MINSA has found 299 positive cases of dengue fever. Of these, 22 patients are being treated as presumed cases of hemorrhagic dengue.

Ministry of health sources indicated that the climate changes in May and June have increased the incidence of these diseases.

Last year a half million persons suffered from dengue, and 16 persons died from its hemorrhagic variety.

## Health Alert in Leon

Managua BARRICADA in Spanish 12 Jul 86 p 8

[Article by Noel Mendoza]

[Text] Leon. A state of alert about an epidemic outbreak of diseases, primarily diarrhea, measles, rubella, meningitis, and dengue, has been declared by the regional MINSA and FSLN [Sandinist National Liberation Front] officials and the Leon mass organizations in Region II of Nicaragua. An appeal has been made to the population of western Nicaragua to cooperate in efforts to clean up and eliminate possible breeding sources for the mosquitoes which transmit dengue fever.

Dr Juan Antonio Quant, MINSA's regional delegate, stated that there has been a 400 percent increase in cases of diarrhea among children; in addition, 52 cases of measles have been reported, and "Aedes aegypti" mosquitoes have been spotted within a radius of 21 blocks from the Fundeci, Guadalupe, Villa 23 de Julio, and San Felipe districts.

Quant noted that last year 60 percent of Leon's population suffered from the ravages of "break-bone fever," as the first stages of the disease transmitted by the "Aedes Aegypti" mosquito are known. This disease leaves the person with a lowered resistance, and susceptible to contracting hemorraghic dengue.

### Steps Taken for Health Centers

To cope with the epidemic outbreak of these diseases, the authorities have directed health centers to extend their hours of service to the public. The William Rodriguez health center and the Barrio Subtiava health center will be open from 0700 to 2000 without interruption, and on Saturdays from 0700 until 1100.

Because of its strategic location, the Perla Norori health center will remain open from 0700 to 2200, and on Saturdays from 0700 until 2000 without interruption.

### Meningitis

There have been 15 new cases of meningitis reported this week. This disease is affecting school-age children.

Dr Quant urged parents not to overuse household remedies or to resort to self-medication, especially for meningitis, as there is no appropriate medication for this disease. The best thing is to bring the patient to the nearest health center. In addition, he recommended taking proper hygienic precautions, such as sterilizing all household utensils.

He said that each citizen should serve as a people's brigade member. If not, he warned that "the results could be catastrophis for this region."

The women's group, AMNLAE, immediately urged its members to conduct door-to-door information campaigns. It also asked market vendors to keep their stalls clean and to use special care in handling foods sold to consumers.

7679
CSO: 3248/581

PEOPLE'S REPUBLIC OF CHINA

## HEPATITIS A VIRUS CAUSING CYTOPATHIC EFFECTS ISOLATED

Beijing CHINESE MEDICAL JOURNAL in English Vol 99, No 5, May 86 pp 387-392

[Article by Wu Shen [0702 1957]; Ju Liancai [7263 6647 2088], PLA 302 Hospital, Beijing; Shao Huixun [6730 1920 6064], Municipal Health and Anti-Epidemic Station, Beijing; Zhang Xitan [1728 5045 0982], Military Academy of Medical Sciences, Beijing; Meng Qinghai [1322 1987 3189], Heilongjiang Health and Anti-Epidemic Station, Heilongjiang; and Li Xueguang [2621 1331 0342], Fentai District Health and Anti-Epidemic Station, Beijing]

[Text]

**A strain (named BJ-1) of hepatitis A virus (HAV) causing cytopathic effects (CPE) has been isolated in A549 cell cultures from a fecal specimen of an infant with hepatitis A. Hepatitis A antigen (HAAg) was detectable in about 50% of the cells by immunofluorescence (IF) assay. The viral antigenicity was specifically identified by monoclonal anti-HAV and chimpanzee reference antiserum to HAV (NIH). HAV particles in crystal arrangement were observed in cell cytoplasm by electron microscopy in ultrathin sections. The particles appeared both "empty" and "full". It was observed that many 27-30 nm virus particles were aggregated by convalescent human hepatitis A sera and chimpanzee HAV antisera observed by immune electron microscopic (IEM) examination. BJ-1 HAAg could be detected on day 34 after inoculation at the initial passage. The virus titers increased and the virus replication cycle shortened with serial passages. The highest TCID 50 was $10^{-5}$/0.1 ml and the shortest replication cycle 2-3 days. IF kit consisting of BJ-1 HAV infected A549 coverslip culture and sheep fluorescence antibody to human IgM were made to detect anti-HAV IgM. Comparing the BJ-1 IF with the Abbott EIA HAVAB-M kit, the coincidence rate was 98.4% (246/250).**

The specific diagnosis of hepatitis A was limited, because production of the HAAg diagnostic kit using purified HAAg from artificially infected marmosets and chimpanzees is expensive in foreign countries and obtaining HAAg fecal specimens is difficult in China. So type classification of viral hepatitis and epidemiological investigation of hepatitis A is very limited. The successful propagation of HAV in cell culture was first reported by Provost and Hilleman[1] in 1979. After this, several similar reports were made,[2-9] but the source of HAAg was still unresolved. Labile serial passage, long replication cycle and low HAV titers in cell culture were the major reasons for failure. Therefore, it is difficult to mass-produce the HAV diagnostic kit. We propagated HAV in several cell lines and the BJ-1 strain causing CPE has now been isolated in the A549 cell line. The isolation and identification of BJ-1 are reported in this paper.

### MATERIAL AND METHODS

**Hepatitis A virus.** 10% stool extract (Long A-1, fecal specimen from an infant with typical hepatitis A provided by Heilongjiang Health and Anti-Epidemic Station) containing a large number of HAV particles by IEM examination was clarified by low speed centrifugation. The supernatant, into which 1,000 μ/ml penicillin and 1,000 μg/ml streptomycin were added, was diluted 10 fold with maintenance medium before inoculation.

**Cells.** A549 cell line was obtained from the Institute of Virology, Hubei Medical College and the Fifth Institute of the Military Medical Academy of Sciences. The growth medium was a Eagle's medium containing 10% calf serum, 100 u/ml penicillin, 100 μg/ml streptomycin and 100 μ/ml kanamycin, pH 7.2-7.6. The maintenance medium was Eagle's medium containing 4% calf serum, penicillin, streptomycin and kanamycin as above.

**Virus Propagation.** Cultivation was done in 10 ml flasks or 2 ml tubes containing converslips. Confluent monolayers of cells were drained, washed three times with Hank's solution and inoculated with 0.4 ml of 1% stool supernatent per tube or 2 ml per flask, and absorbed at 32 °C for 2-4 hrs. They were examined by microscope and shaken every 30 minutes. Maintenance medium was again added (5 ml per flask, 1.6 per tube) as soon as the cells contracted and cultivation continued at 32 °C. Examined by microscope daily, maintenance medium was changed every 2 days. Specimens were passaged and HAAg detected 20 days later.

**Passage.** As the cells became a confluent monolayer, the maintenance medium was discarded, the cells washed three times with Hank's solution, 2 ml of 0.25 % trypsin solution added (pH 7.8) per flask, when the cells contracted they were drained, growth medium was added to resuspend the cells which were then divided into 2 flasks. Cultivate at 36°C. When the cells were confluent, the growth medium was changed to maintenance medium, incubated at 32° C.

**Indirect immunofluorescence assay to detect HAAg.** Anti-HAV IgG positive human convalescent hepatitis A sera detected by Abbott kit at 1:50-1:100 dilutions were employed as the first antibody. Sheep fluorescent antibody against human IgG (produced in our laboratory and Shanghai Institute of Biological Products) was used at 1:5,000 dilution of Evans blue in PBS, at 1:8-1:16 titers. The infected coverslip cultures were washed three times with PBS (0.01 M, pH 7.2-7.4), fixed with cold acetone, washed with tap water for 5 minutes, rinsed with deionized water for 1 minute, dried with filter paper, then one drop of the first antibody was added and the sample put in a damp box at 37 °C for 60 minutes. Washed and dried as above, one drop of fluorescent antibody was added and the sample incubated at 37° C for 30 minutes in a damp box. After washing and drying again as above, the coverslip cultures were sealed with buffered glycerol (pH 8) or sealing glue, and examined by Olympus fluorescence microscope. Normal coverslip cultures were used as control.

Examination of anti-HAV IgM, see reference 13. Electron microscopy of ultrathin sections, see reference 10.

**Immune electron microscopy.** As CPE appeared in about 50% of the infected cells, the cell cultures were frozen at -60°C and thawed five times, intermittently treated for 3 minutes by ultrasonic wave (23,000 HZ frequency, 20 μm amplitude). After centrifugation at 10,000 rpm for 1 hour, 0.1 ml of a 1:40 dilution of human convalescent hepatitis A serum was added to 0.9 ml of supernatant. The mixture was insubated at 37 °C for 1 hour and then held at 4 °C overnight. Centrifuged at 28,000 rpm for 1 hour, the pellets were resuspended in 0.1 ml PBS. A drop of suspension complex was placed onto a carbon-coated grid. After being absorbed the specimens were negative-stained with 3% phosphotungstate (pH 6.8). A DXB1-12 electron microscope was used.

**Identification of specificity.** The following tests were used to identify the viral specificity: indirect IF assay with paired chimpanzee serum; immunofluorescence blocking assay with paired chimpanzee serum; IEM examination with paired chimpanzee serum; comparison of BJ-1 IF kit and Abbott EIA HAVAB-M kit in detecting anti-HAV IgM; IF (indirect) assay with monoclonal anti-HAV IgG3;[12] neutalization tests with paired serum, equal volumes of 1:10 diluted virus suspension and antiserum were mixed, incubated at 37 C for 1 hr and kept at 4 C overnight. Then 0.2 ml of the mixture were inoculated into A549 cell culture, incubated at 32 C and neutralized with enteroviruses (poliovirus type 1-3; echovirus type 1-9, 11-15, 17-27, 29-34; Cox virus type A9, B1-6) antisera (using 40 neutralization units for antisera and 100-1,000 TCID 50/0.1 ml for virus).

Chimpanzee sera (NIH, cat. No. V811-501-573) were obtained from Dr. Hu (Shanghai Health and Anti-Epidemic Station). Ascitic fluid of hybridoma and control ascitic fluid were given to us by the Liver Diseases Center, General Hospital, Beijing Military Area. Sheep fluorescent antibody to mouse IgG was from Dr. Li (the Fifth Institute of the Military Medical Academy of Sciences). Fluorescent antibody (Denmark) to mouse IgG was a gift from Dr. Gu (Chinese Academy of Medical Sciences). 2BS cells were supplied by the Infantile Paralysis Laboratory, Institute of Biological Products, Ministry of Public Health. The HM-175 virus strain was obtained from the Hepatitis Laboratory, Institute of Virology, Chinese Preventive Medical Center. Enterovirus antisera was produced by the Kunming Institute of Biology, Chinese Academy of Medical Sciences.

**Viral physico-chemical and biological properties.** Virus sensitivity to ether and low pH were tested as discribed in reference 11. Virus heat stability was measured by incubating a virus suspension at 56 °C for 30 minutes and $6^0$ minutes and at 37 °C for 60 minutes. Hemagglutination test was done according to that in reference 11. Viral sensitivity in mice was conducted by subcutaneous and intracerebral injection of 0.02 ml of a 1:100 dilution of virus suspension. 18 hours old new born mice were used for this purpose. Virus sensitivity in cells was tested in primary human embryonic kidney cells, primary human embryonic liver cells, serially passaged 2BS cells and SL7 cells (The SL7 cells were given by the Shanghai Institute of Biological Products), incubated at 32 °C.

## RESULTS

**Virus isolation.** Minute immunofluorescent granules were detected in some A549 cells on day 34 after virus inoculation at initial passage. Some tadpole shaped cells were detected on day 15 at passage 2. Both the number of affected cells and number of fluorescent granules increased with time. The cells contracted to small spheres and peeled off from the flask wall. Passage 3 culture fluid also had CPE, demonstrating that there were free viral particles in it. This CPE was observed from passage 3 through passage 19 (Fig 1). The CPE appearance time shortened with increased passages. The virus propagation cycle also shortened, being only 2-3 days at passage 6. CPE (+) was observed at 24 hrs and peak CPE (++) was reached 48-72 hrs after inoculation. 50% of the cells were IF positive, they contained immunofluorescent granules. The number and brilliance of the flourescent granules indicated the amount of virus propagated in the cell cytoplasms. IF negative cells and normal cells were purplish red with no specific fluorescent granules observed in them (Fig 2). Virus titers were $10^{-3}$ at passage 3 and $10^{-5}$ at passage 6 and 8. The CPE and IF results were in good agreement. CPE was also shown in primary human embryonic kidney cells (Fig 3), and IF was positive (Fig 4).

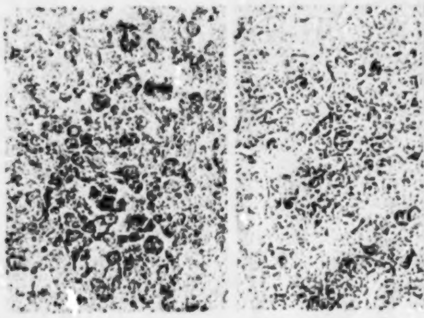


Fig 1. (a) BJ-1 strain infected A549 cells, tadpole shaped, 48 hrs after inoculation. (b) Normal A549 cells. ×300.

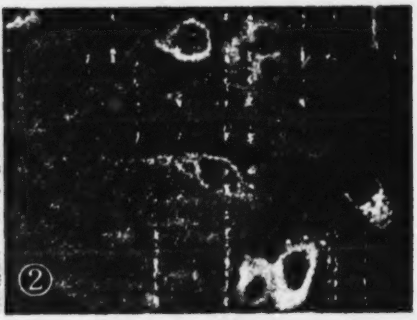


Fig 2. Immunofluorescent granules are observed in A549 cell cytoplasm infected with BJ-1 strain 48 hrs after inoculation. ×1,600.

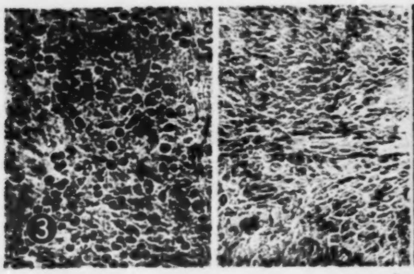


Fig 3. BJ-1 strain infected primary human embryonic kidney cells 48 hrs after inoculation on the left and normal cells on the right. ×300.

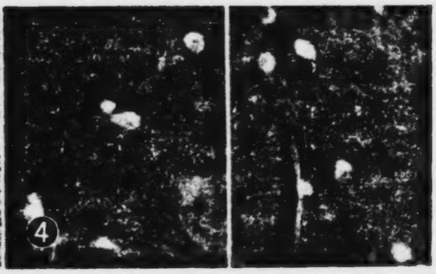


Fig 4. BJ-1 strain infected primary human embryonic kidney cells 48 hrs after inoculation. Specific fluorescent granules are seen in the cell cytoplasm.

**Virus identification.** *Virus morphology.* 27-30 nm particles in crystal arrangement were found in infected cell cytoplasm by electron microscopy of ultrathin sections. Both "empty" capsids and "full" intact virions were seen. The morphology and size of the viruses are characteristic of HAV (Fig 5). Identical virus particles were observed by IEM examination. Antibodies were coated on the surface of viruses and particles were connected by antibody bridges. This is specific antigen-antibody aggregation reaction (Fig 6).

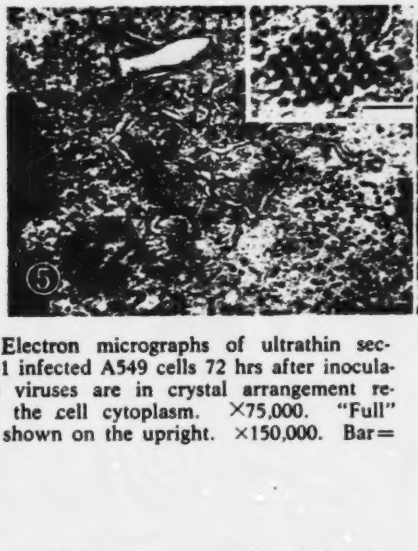


Fig 5. Electron micrographs of ultrathin sections of BJ-1 infected A549 cells 72 hrs after inoculation. The viruses are in crystal arrangement replicated in the cell cytoplasm. ×75,000. "Full" virions are shown on the upright. ×150,000. Bar= 100 nm.

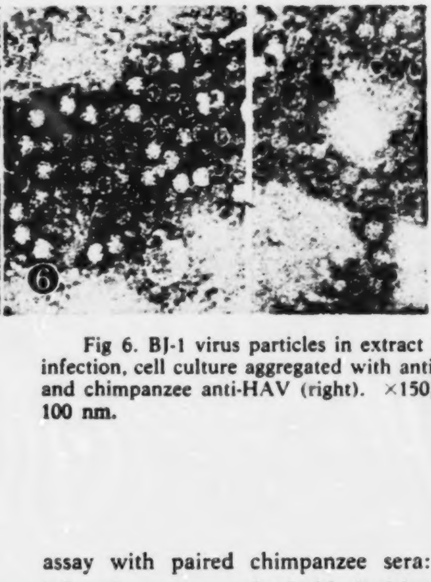


Fig 6. BJ-1 virus particles in extract 72 hrs post-infection, cell culture aggregated with anti-HAV (left) and chimpanzee anti-HAV (right). ×150,000. Bar= 100 nm.

*Virus specificity.* IF assay with paired chimpanzee sera: IF assay was negative with preinfected serum and positive in postinfection serum. 40-50% of the cells were IF positive. This indicated that immunofluorescence is related to HAAg distribution in infected cells. IF blocking assay with paired chimpanzee sera: the post-infected serum completely blocked but the preinfected serum did not. IEM examination with paired chimpanzee sera: the post-infected serum aggregated virus (Fig 6, right) but the preinfected did not. Comparison of BJ-1 IF kit and Abbott

EIA HAVAB-M kit in detection of anti-HAV IgM: the results are listed in Table 1 which shows that HAV in both kits have identical antigenicity. The coincidence rate is relatively high. Identification with monoclonal anti-HAV IgG 3: Table 2 indicates that BJ-1 and HM-175 have identical antigenicity, but BJ-1 is stronger than HM-175 by IF assay. Neutralization tests with paired sera: anti-HAV positive sera could neutralize BJ-1 and CPE and IF assay was negative. In contrast, anti-HAV negative sera could not neutralize BJ-1 and CPE, and IF assay was positive. This demonstrated that BJ-1 caused CPE was specific and BJ-1 could be neutralized by anti-HAV sera. Neutralization with enteroviruses antisera: all the 41 enteroviruses antisera could not neutralize BJ-1, CPE, and IF assay was positive.

**Viral physico-chemical and biological properties.** The virus was resistant to ether, indicating that it has no envelope. The virus was stable to pH 3 and pH 5 treatment and labile at 56 °C for 30 minutes and 60 minutes, but stable at 37 °C for 60 minutes. No aggregation was found with human type "O" erythrocytes. 18 hours old new born mice were nonsusceptible to the virus. Primary human embryonic kidney cells and primary human embryonic liver cells were susceptible to the virus, causing CPE. The 2BS cell line and SL7 cell line were nonsusceptible.

*Table 1. Comparison of HAVAB-M EIA kit with HAVAB-M IF kit detection of anti-HAV IgM*

| | | Abbott EIA positive | HAVAB-M kit negative | Coincidence rate |
|---|---|---|---|---|
| IF kit | Positive | 157 | 4 | 98.4% |
| | Negative | 0 | 89 | |

*Table 2. Results of identification of two HAV strains with monoclonal anti-HAV IgG3*

| | Dilution | HAV BJ-1 | HAV HM-175 | Control of cells A549 | Control of cells 2BS |
|---|---|---|---|---|---|
| A614[*] ascitic fluid | 1:10 | ++[**] | + | — | — |
| | 1:50 | + | — | — | — |
| | 1:100 | —[***] | — | — | — |
| Control mouse ascitic fluid | 1:10 | — | — | ND | ND |
| | 1:50 | — | — | ND | ND |
| | 1:100 | — | — | ND | ND |

[*] A 614 is an anti-HAV IgG3-secreting hybridoma.
[**] + represents positive reaction.
[***] — represents negative reaction.

## DISCUSSION

The BJ-1 strain revealed identical antigenicity with other HAV strains reported previously morpholoically, serologically and biologically, expecially when compared with specific reference standards (paired chimpanzee sera, monoclonal anti-HAV IgG, Abbott kit, HM-175). It was demonstrated by our series of identifications that BJ-1 caused CPE was specific and there was no evidence of other viruses. BJ-1 causes CPE in cell culture, and the dynamics of the virus replication can be observed by microscope. This is advantageous to the investigation of the pathogenesis, prevention and treatment of HAV hepatitis. BJ-1 propagation pattern in A549 is similar to that of HAV isolated by Kojima et al in FL and Vero cell lines.[6] They are rapid propagating strains. The phenomenon of self-limiting replication was observed. Only half of the cells were positive at peak virus propagation. The number of positive cells decreased with incubation time. The reasons for this are still unknown and need further study.

BJ-1 strains possess three marked advantages over HAV strains previously reported. First, it causes obvious CPE in A549 cell culture, primary human embryonic kidney cells and primary human embryonic liver cells, so the dynamics of virus replication can be observed directly by microscope. Second, virus propagation is rapid and the replication cycle is short in cell culture. CPE appeared 24 hrs after inoculation and peaked at 48-72 hrs. Finally, immunofluorescent reaction is strong enough for detection of anti-HAV IgM and IgG by indirect IF assay.

HAVAB-M IF kits have been prepared and employed in most parts of China.

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/6091
CSO: 5400/1115

PEOPLE'S REPUBLIC OF CHINA

## INFECTION OF LEGIONELLA PNEUMOPHILA

Beijing CHINESE MEDICAL JOURNAL in English Vol 99, No 5, May 86 pp 401-406

[Article by Liu Shuiqu [0491 3055 3255], Department of Infectious Diseases, First Teaching Hospital, Zhejiang Medical College, Hangzhou; Sun Guoxiang [1327 0948 4382], Anti-epidemic Station of Zhejiang Province, Hangzhou; Yang Yongping [2799 3057 1627], Institute of Infectious Diseases, Zhejiang Medical College, Hangzhou; and Ma Yilin [7456 0076 2651], Department of Infectious Diseases, First Teaching Hospital, Zhejiang Medical College, Hangzhou]

[Text]

**From October 1984 to February 1985, 109 lots of sera were obtained from 68 patients with pneumonia of unknown origin and detected by IFA's technique. Of the 109 lots, 101 were from 60 hospitalized patients and out-patients in the acute or convalescent stage. Five hospitalized patients were found to have titers of antibody against legionella pneumophila up to the serologic diagnostic standard, i.e., 4-fold or ≥1:256. The titers of 8 lots from 8 patients discharged for 4-5 months were either negative or very low. It is the first time legionellosis was found in Zhejiang province.**

Legionellosis was first found in 1976 in the USA. It is an acute infectious disease of the respiratory system, and the pathogen is legionella pneumophila(LP) recently recongnized as a gram-negative bacillus. This disease has been found in many countries. In 1983, the first case in China was demonstrated by means of indirect fluorescent antibody (IFA) in Nanjing,[1] and LP strain was then isolated.[2] From October 1984 to February 1985, 109 lots of sera were obtained from 68 patients with pneumonia of unknown origin. The samples were all tested by IFA's method. Of 109 lost, 101 were obtained from 660 hospitalized patients or out-patients in the acute and convalescent stages. In 5 of the 60 hospitalized patients the antibody titers against LP reached the serologic standard, that is, up to 4-fold or≥1:256. The titers of 8 lots from patients who had already recovered and been discharged for 4-5 months were either negative or very low. Thus legionellosis was first confirmed in Zhejiang, China.

### MATERIAL AND METHODS

The sheep against human IgG fluorescent antibody [Hp (82), Hu No. (7)30] was supplied by Shanghai Institute of Biological Products. Its specific staining unit was 1:10. The fluorescent microscope used was an Austrian made polyver widefield photomicroscope. Other material used included polyacrylstyrence plastic glass plates, Philadelphia I (Ph-I) LP supplied by Nanjing Anti-Epidemic Station, and LP Ph-I antisera.

The patients' sera were tested by IFA's method.

## RESULTS

Bacterial bodies showing strong green fluorescence were 4-plus (++++). less strong 3-plus (+++), green-yellow 2-plus (++) and yellow 1-plus (+). In our group, only bacterial bodies of more than 2-plus were reported as positive titer. Titers≥1:256 were regarded as positive.

Of 68 cases 60 were hospitalized patients or out-patients. 101 lots of sera were obtained from 60 hospitalized or out-patients, antibody titers against LP were found to have reached the serologic diagnostic criteria in 5 patients, 3 being 4-fold, 1 1:256 at first, then 1:128 twice, 1 1:128 and 1:256 in the beginning but 1:16 and 1:64 twice later. The antibody titers of 8 sera lots from 8 patients who were discharged after recovery for 4-5 months were either negative or very low.

## CASE REPORT

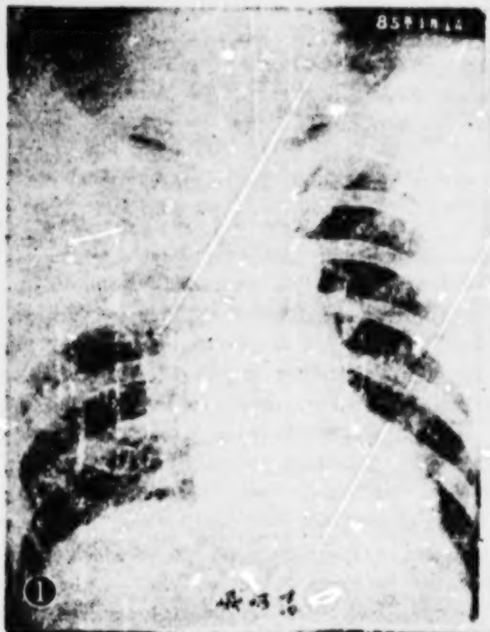
**Case 1.** A 64-year-old woman was admitted on November 5, 1984 after 6 days of fever, cough, headache, nausea, and vomiting. She passed loose stools 3 to 6 times daily, without abdominal pain. Little white sputum. The temperature swung between 39.4 to 40 C, pulse 108/min, respiration 23/min, and blood pressure 120/60 mm Hg. A few dry rales were heard in the right lung. Other physical examinations were normal. Laboratory findings showed the stool was negative; urine protein positive (+), urine granular tube cast(+) with a few pus cells, WBC 10,000/mm$^3$ (N 88%, L 12%); liver function normal; creatinine 1.9 mg/dl; $CO_2CP$ 34 vol/dl; BUN 18 mg/dl; serum electrolytes $K^+$, 4.1 mEq/L, $Na^+$, 138 mEq/L, $Cl^-$, 98 mEq/L, and $Ca^{++}$, 9 mg/dl; ESR 120 mm/hr; and routine blood culture negative. Chest X-ray showed pulmonary infiltration in the right upper lobe. IFA's titers against LP serogroup I (IFA-I) were 1:4 on disease day 14, 1:32 on day 31, and 1:128 on day 81. Erythromycin combined with chloromycetin was given for three days. The temperature began to decline on the 3rd day of drug administration. Then the therapy changed to ampicillin combined with penicillin G for five days and the fever dropped further normalizing on the 11th day of treatment. Infiltration of the lung further improved. At last, erythromycin combined with chloromycetin was administered again for 8 days. She recovered and was discharged on the 35th day.

**Case 2.** A 59-year-old woman was admitted on December 19, 1984 after 3 days of chills, fever, cough with bloody sputum, dyspnea, myalgia, and palpitations. Bloody sputum was spit the second day of the attack. Gernerally, the amount of white mucous sputum was little. The body temperature was between 37 and 38.5 C, heart rate 100/min, respiration 21/min, and blood pressure 110/70 mm Hg. There were moist and dry rales in the right lung. Other physical examinations were normal. Laboratory findings included: stool and urine negative, WBC 9,900/mm$^3$ (N 90%, L 9% and E 1%), Hb 11 g/dl, platelets 53,000/mm$^3$, serum total protein 7 g/dl (albumin 3.6 g/dl, globulin 3.4 g/dl), SGPT normal, serum electrolytes $K^+$ 4.2 mEq/L, $Na^+$ 134 mEq/L, $Cl^-$ 104 mEq/L, $Mg^{++}$ 1.8 mEq/L, and ESR 57 mm/hr. The routine sputum culture was sterile. Chest X-ray showed a bilateral inflammatory infiltration. IFA-I was 1:32 on disease day 8, 1:128 on days 24 and 50. At the beginning erythromycin was used for 7 days, resulting in gradual decline of temperature. After amikacin and lincomycin were given for 14 days, she recovered and was discharged from the hospital on the 27th day.

**Case 3.** A 72-year-old male patient with chronic bronchitis for over a decade was admitted on January 12, 1985 after 3 days of cough, chest stuffiness, and fever. Blood was found in his sputum one day before hospitalization. The sputum was generally white and mucoid and seldom yellow. On admision he felt abdominal distension and pain, but had no vomiting or diarrhea. He was suspected of having lung cancer. Breathing sound was decreased and moist rales were heard in the right upper lung. The liver was palpable, 2 and 3 cm below the right costal margin and the ensiform process. Other physical examinations were normal. The vital signs were temperature 35.5-38.4 C, pulse 90/min, respiration 23/min, and blood pressure 110/70 mm Hg. Laboratory findings showed that stool, urine and sputum routines were normal; WBC 26,600 with N 94%, L 5% and E 1%; serum total protein 6.7 g/dl with albumin 3.8 g/dl and globulin 2.9 g/dl; serum electrolytes K$^+$ 4.6 mEq/L, Na$^+$ 141 mEq/L, Cl$^-$ 94 mEq/L, and Ca$^{++}$ 8.4 mg/dl; ESR 66 mm/hr; creatinine 1.8 mg/dl; CO$_2$CP 34 vol/dl; and BUN 25.6 mg/dl. Cancer cells were negative in the sputum. Routine sputum culture showed normal flora. EKG showed sinus rhythum, but hypertrophy of the right cardiac ventricle. Chest X-ray suggested inflammatory infiltration of the right upper lung (Fig 1). IFA-I was 1:4 on disease day 6, 1:8 on day 13 and 1:256 on day 20. He received medecamycin (derived from erythromycin) combined with gentamicin for 16 days, and his fever began to drop on the 6th day. He recovered and was discharged on the 23rd day of admission.

**Case 4.** A 49-year-old male with 20 years' chronic bronchitis was admitted on December 20, 1984, after one month of right chest pain, half a month of mild fever and difficult breathing. Strong thoracodynia occurred when coughing or breathing deeply. The vital signs were temperature 36.7-40 C, pulse 100/min, respiration 25/min, and blood pressure 110/70 mm Hg. Vocal fremitus was decreased and dull resonance heard in the right chest. Dry and moist rales were heard in the lung. The liver was tender and palpable 3 and 4.5 cm below the right costal margin and the ensiform process. Laboratory findings included stool negative; urine protein positive (+++) (WBC 0-2/HP and a few pus cells); WBC 24,500 with N 98% and L 2%; Hb 13 g/dl; platelets 310,000/mm$^3$; ESR 96 mm/hr; AFP negative; serum total protein 5 g/dl with albumin 2.1 g/dl and globulin 2.9 g/dl; serum electrolytes K$^+$ 4.4 mEq/L, Na$^+$ 144 mEq/L, Cl$^-$ 102 mEq/L; AKP 14 u; and LDH 325 u. Right chest fluid was muddy, containing leukocytes 5,640 (N 98%, L 2%), erythrocytes 80. Rivalta's test was strongly positive. Cancer cells were not found. Leukocytes and erythrocytes in the liver pus were 54,720 (N 87%, L 13%) and 27,200. Ameba was negative. Routine cultures of blood, sputum, chest fluid and liver pus were sterile. PPD test was strongly positive. Chest X-ray showed inflammatory shadows in both lungs and pleural effusion and hypertrophy in the right thoracic cavity (Fig 2). Explorations by ultrasound type A and B showed pleural effusion and liver abscess, but no cancer waves. EKG was normal. IFA-I was 1:128 on disease day 34, 1:256 on day 44, 1:16 on day 90, and 1:64 on day 98. After ampicillin combined with cloxacillin was given for 12 days leukocyte count fell to normal range. When the therapy was changed to cafamandole on the 13th day fever remained high. After pleural effusion and liver abscess were drained by centesis on the 20th day the fever gradually dropped to normal. He was cured and discharged from the hospital on the 82nd day.

**Case 5.** A 40-year-old female patient with chronic bronchitis of 5 years' duration was admitted on December 20, 1984 because of 2 months of cough with sputum and 1 month of fever and hemoptysis. In the early stage of the disease, sputum was whitish, about 20 ml per day, including foam. Chest X-ray showed an abnormal shadow in the lower lung. The patient was thus diagnosed a case of pneumonia. Penicillin G and streptomycin were given with no effect. 124 days after onset of the disease, she began to have low-grade fever, night sweats, increasing amounts of bloody and pussy sputum which gradually became brownish yellow and foul. Chest X-ray showed a lung abscess in the left lower lobe (Fig 3). Gentamicin was of no effect and fever and bloody and pussy sputum remained as usual. The vital signs were temperature 36.2-39.2 C, pulse 100/min, respiration 21/min and blood pressure 134/80 mm Hg. No rales were heard in the lungs. Other examinations were normal. Laboratory examination found WBC 10,500 with N 81%, L 16% and E 3%, Hb 10.3g/dL, and platelets 176,000/dl. Serum electrolytes were K$^+$ 3.9 mEq/L, Na$^+$ 139 mEq/L, Cl$^-$ 92 mEq/L, Ca$^{++}$8.2 mg/dl, and Mg$^{++}$ 2.1 mEq/L. BUN was 8.8 mg/dl, creatinine 0.9 mg/dl, ESR 95 mm/hr, and liver function normal. Stool examination was normal. Urine protein was traced and a few RBC and pus cells were found. Routine sputum culture yielded normal flora. In the sputum no tubercular bacilli and cancer cells were found. EKG showed sinus rhythum. LP culture of the lung tissue was negative. IFA-I was 1:256 on disease day 102 and 1:128 on days 103 and 133. She received penicillin G, streptomycin, ampicillin, cafamandole, gentamicin, oxacillin, amikacin, and metronidazole, etc, but the effect was poor. Her fever began to withdraw on the 3rd day of admission when treatment was changed to cefazolin on the 36th day. Her temperature was normal on the 13th day of cefazolin treatment. Resection of the lung abscess was performed later. She recovered and was discharged on the 105th day.



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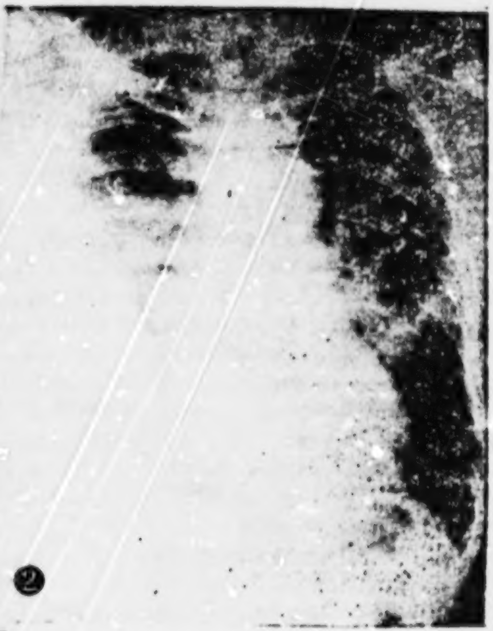

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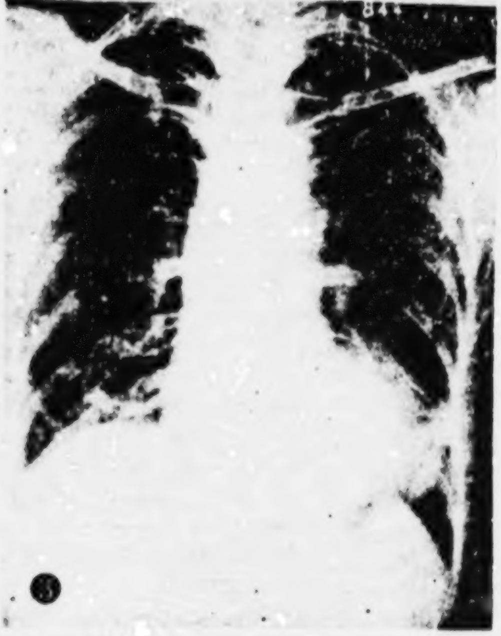

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Fig 1. (Case 3) Pneumonia in the right upper lobe.

Fig 2. (Case 5) Abscess in the left lower lung.

Fig 3. (Case 4) Bilateral pneumonia complicating right effusion pleurisy and liver abscess.

## DISCUSSION

Legionellosis in Zhejiang province is first confirmed by IFA's technique. This is the second report of this disease in China. In our series, all antibody titers against LP were 4-fold or≥1:256. Because Ph-I is a predominant pathogenic strain and we detected only Ph-I in our study, the pathogenic strains of the 5 cases were presumably wholly Ph-I. Up to the present altogether 23 species of PL have been found thoughout the world.[3] All 5 legionellosis patients in our series suffered from pneumonia, accounting for 8.3% of the pneumonia cases of unknown origin (5/60). The titers of Cases 1-3 progressively increased up to 4-fold the serum diagnostic standard. Of the 3 cases, 2 (Cases 1 and 3) had titers increasing up to 32- (Case 1) and 64-fold (Case 3). Sera were obtained from 3 cases (Cases 1-3) on the 6-14th days of disease onset, and from the other 2 cases on the 34th (Case 4) and 102nd (Case 5) day. It was noted that the former 3 cases were acute LP infection and the latter 2 were probably subacute infection before admission or nosocomial secondary infection.

Legionellosis mainly occur in summer and autumn, but sporadic cases have been found throughout the year.[4] Of our 5 cases, 4 were from Hangzhou city proper and 1 from a town in Zhejiang province. Their illnesses started between October and January. Clinical manifestations were similar to those of previous reports.[5] Early stage LP pneumonia may be accompanied by bacteremia, usually leading to sepsis.[6,7] Case 4 in this series first experienced respiratory symptoms with mild fever, but his condition suddenly deteriorated, including high fever, marked leukocytosis, thoracic empyema, and liver abscess. Obviously, the patient was having a septic course, and the pathogens probably arosed from infection of the lungs. LP caused pneumonia may result in extensive necrosis of the lung tissue and formation of abscesses of up to 10 cm in diameter.[8] The reason for formation of lung abscess in Case 5 was probably because the patient failed to receive medical treatment in time. But LP culture of the lung tissue was negative possibly due to cefazolin administered after hospitalization. About 50% of legionellosis patients develop hyponatremia in the early stage due to increased secretion of antidiuretic hormones,[5,7] this phenomenon may be helpful in diagnosis. But levels of serum sodium were normal (134-144 mEq/L) in our series probably because of the limited number of cases.

Erythromycin is the drug of choice for treatment. According to Meyer[5] this drug may be given 2-4 gm daily for 3 weeks for avoidance of recurrence. The temperature began to fall after 24-48 hours of drug administration. Refampicin, doxyclyline and SMZ combined with TMP were also effective, but penicillins, cephalosporines, vancomycin, clindamycin, and aminoglycosides were not helpful. Erythromycin is usually used at a 1.2 gm dosage per day in this country. Of the 5 cases, Case 2 was cured only by erythromycin (1.2 gm daily, iv for 7 days), the temperature of Case 1 began to withdraw on the 3rd day of treatment with erythromycin combined with chloromycetin; Case 3 received medecamycin and gentamycin, and the temperature also dropped, but later. These data demonstrate that erythromycin, medecamycin, chlorocetin and gentamicin are effective for this disease. In Case 5, the temperature normalized only when cefazolin was used. Obviously, the cephalosporins and aminoglycosides are not necessarily unresponsive to legionellosis. Case 4 was complicated by pleurisy and liver abscess and his temperature declined only after pus aspiration, showing that abscess drainage is very important in treating legionellosis.

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CSO: 5400/1115

## CHINA CLAIMS 3 MAJOR DISEASES CONTROLLED USING TRACE ELEMENTS

HK050544 Beijing CHINA DAILY in English 5 Aug 86 p 3

[Article by Ye Dingbong]

[Text] Three major diseases have been successfully controlled by using trade elements, according to a preventive medicine expert.

Goiter, Keshan and Kaschin-Beck's diseases, which affect millions of people in China, can be either controlled or cured by adding fortified iodine or selenium to people's daily diet.

Incidences of the three diseases have dropped to the lowest level ever recorded, according to Chen Xiaoshu, director of Research Institute of Nutrition and Health under the Chinese Academy of Preventive Medicine.

Goiter, a disease found in many places of the world, occurs frequently in areas where iodine is lacking. In China, Chen said, 250 million people in 1,464 counties were once vulnerable to the condition.

Since large scale preventive work was carried out, introducing iodine salt to goiter-affected people, incidence had been reduced. The disease has been controlled or cured among 130 million people in 512 counties, according to Chen.

Keshan disease is a heart disease with a high death rate. It is found in the countryside of 15 provinces and municipalities in a belt that runs from the northeast to the southeast.

The areas affected by Keshan disease, more often than not, overlap with areas affected by Kaschin-Beck's disease, or osteoarthrosis deformans endemica. Most incidences of Kaschin-Beck's disease were found in the northwest, Chen said.

Though the real causes of the two diseases are still unknown, scientists have discovered that lack of selenium in the diet appears to be a factor.

Since 1976, the people in the areas affected by the two diseases have been asked to take salt fortified with selenium. As a result, the incidence of the two diseases in the north has been brought under control and the situation has been improved in the south.

Chen said China was the first country in the world to successfully use selenium in curing human diseases. The achievements have drawn attention from all over the world.

"But we have tremendous work to do before we can eliminate the diseases," she said.

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CSO: 5400/4116

## TIANJIN VIROLOGY SEMINAR RECORDS SUCCESSES

OW231246 Beijing XINHUA in English 1200 GMT 23 Jul 86

[Text] Tianjin, 23 Jul (XINHUA)--China has made marked progress in the research and treatment of viral diseases, according to China's first seminar on virology held here last week.

Nearly 500 experts from across the country shared their latest achievements at the meeting.

Hepatitis B and epidemic hemorrhagic fever used to be two major diseases threatening the Chinese population. Nowadays, Chinese doctors are able to accurately identify hepatitis B patients.

They have also discovered how hepatitis B virus can be transferred to a fetus and the effective way to cut off the channel of infection between them, the seminar was told.

China has also succeeded in separating the virus which causes epidemic hemorrhagic fever, according to the meeting. Progress has been made in developing a vaccine to combat it.

China is also able to detect with increasingly sophisticated equipment the viruses which lead to diarrhea, nasopharyngeal cancer, encephalitis B, dengue fever and infant deformity.

Meanwhile, progress has been demonstrated in the study of virology in animals, plants and insects as well as phagology.

In addition, a new virus has been discovered in rabbits suffering from hemorrhagic pneumonia. A vaccine to combat the disease has been developed, the seminar revealed.

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CSO: 5400/4116

## IMPROVEMENT URGED IN RURAL MEDICAL CARE

OW121158 Beijing XINHUA in English 1000 GMT 12 Jul 86

[Text] Beijing, 12 Jul (XINHUA)--Rural medical care in China is not yet meeting the growing needs of those it serves, according to public health experts quoted in today's PEOPLE'S DAILY.

Participants at a national academic conference on rural reform and public health, which ended Friday in Yantai, Shandong Province, concluded that economic reform has improved rural life but has also created new health problems, the paper said.

To address these issues, conference participants organized the rural public health society, whose potential membership includes 3.54 million rural medical workers.

"The present medical facilities and system can no longer keep pace with the present rural situation," said one expert quoted by the Communist Party paper.

For example, improved medical care has cut infectious and location-related diseases, several conference participants noted. But, they said, with people living longer, more of them have strokes, heart disease and cancer.

At the same time, development of rural industries requires greater attention to safety and environmental protection and to occupation diseases, public health specialists said.

Higher rural living standards have also produced rising expectations about personal health and the ability of medical workers to make early diagnoses of diseases, according to several experts.

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CSO: 5400/4116

## BRIEFS

GUANGDONG 'PARA-CHOLERA' CASES--Beijing, 9 Jul (AFO)--Health authorities in China's southern Guangdong Province have identified 44 cases of "para-cholera", a potentially fatal illness closely related to true cholera, a Chinese medical official said Wednesday. The cases, which appeared from mid-May until mid-June on Hainan Island and in the port city of Shantou, were "light to moderate" and no deaths were reported, said Dr Wang Zao, director of the Health Ministry's Department of Disease Prevention. A Western doctor based in Beijing said he was not familiar with the term "para-cholera." But since cholera can be caused by several different varieties of organisms, he said the name suggested a less virulent strain. Dr Wang told AGENCE FRANCE-PRESSE that the reported cases were widely distributed in the two areas and that intensified measures were being taken in Guangdong and elsewhere in south China to prevent the disease spreading. Para-cholera can result in potentially deadly infections, though such cases are fewer than with true cholera, Dr Wang said. Since the middle of June no new cases had been reported, she said. [Text] [Beijing AFP in English 9 Jul 86 HK] /6662

PREVENTION OF ENDEMIC DISEASE--Beijing, 23 May (XINHUA)--China has made marked progress in the study and prevention of snail fever and endemic diseases. Guangdong Province and Shanghai have eliminate snail fever. Oncomelania has been wiped out covering an area of 11.1 billion square meters across the nation, and more than 11 million people suffering from the disease have been cured. [Summary] [Beijing XINHUA Domestic Service in Chinese 1310 GMT 23 May 86 OW] /6662

CSO: 5400/4116

## GEOGRAPHIC PATTERNS IN MORTALITY, HOSPITAL MORBIDITY ANALYZED

Krakow PRZEGLAD LEKARSKI in Polish No 3, Mar 86 pp 316-310

[Article by Docent M. Wysocki, M. D., director, Medical Statistics Center of the National Institute of Medicine, Warsaw: "Geographic Patterns of Mortality and Hospital Morbidity in Poland (Footnote) (Study conducted under Ministerial Research Plan MR-12)"]

[Text] Geographic patterns of morbidity in Poland were analysed using routinely collected data on mortality and hospital morbidity. Overall morbidity was considered as well as morbidity due to rheumatic heart disease, hypertensive disdase, ischaemic heart disease, cerebrovascular disease, ulcer of stomach and duodenum, and cirrhosis of liver. After age-standardization of the coefficients the provinces were indicated with the lowest and the highest prevalence of above mentioned diseases in 1977 and 1979. Moreover, it was possible to detect the provinces with relatively large discrepancies between levels of hospitalizations and mortality.

The determination of differences in the disease rates in different regions may assist, on the one hand, in formulating hypotheses on the etiology of various diseases and, on the other, it may serve to direct the activities of health service in consonance with the health needs of the local population. To be sure, an accurate determination of the prevalence of various diseases is possible only with respect to diseases which are subject to obligatory reporting (contagious diseases, neoplasms). So far as the totality of all diseases is concerned, however, it is possible to use statistics on the death and hospitalization rates. While such statistics cannot be used to identify with precision the prevalence of diseases within a given population, they have the virtue of being collected routinely, in a standardized manner, for the country as a whole.

The aim of this study was to identify the provinces with relatively highest and lowest rates of overall morbidity as well as of the prevalence of several selected disease groups, as based on mortality and hospital morbidity data. In the analysis, equal significance was attached to each of these ensembles of data. The analysis was applied to data on two years, 1977 and 1979, which served to reduce the influence of fortuitous or short-period changes in the prevalence of diseases on the findings of the analysis.

## Material and Techniques

Data on mortality by age, sex, and province were obtained from the Main Office of Statistics. Data on hospitalization rate were taken from a survey of overall hospital morbidity conducted at hospitals under the jurisdiction of the Ministry of Health and Social Welfare and the Ministry of Transportation. The 1977 data were collected by the technique described in 4 and worked out at the Statistical Techniques Department of the National Institute of Medicine. The 1979 data were collected and processed by means of a modified system based on a 10 percent sample of hospital patients. The analysis was conducted for all diseases as a whole as well as for the following groups and types of disease (numbered in accordance with Revised Instructions No 8, MKChUiPZ): acute and chronic rheumatic diseases (390-398), hypertension (400-404), ischemic heart disease (410-414), cerebrovascular diseases (430-438), gastric and duodenal ulcers (531-532), and cirrhosis of the liver (571). These diseases accounted for more than one-fifth of all deaths and about 12 percent of all cases of hospitalization of males and 7 percent of females (Table 1). The selection of these particular disease groups for this study was due to their attendant relatively high mortality and hospitalization rates and the minimal number of diseases in each group. To be sure, this selection was complicated by the lack of uniformity in the classification of diseases when tabulating the data on mortality and hospital morbidity for 1977.

Mortality and hospitalization coefficients were standardized by age with the aid of the indirect standardization technique, and Poland's population was taken as the standard population. Next, the normalized values $u_i = (w_i-W)S$ (where $w_i$ means age-standardized coefficient for a given province, $W$ is the nationwide coefficient for all Poland, and $S$ is the standard deviation of age-standardized province coefficients) were computed for each coefficient and given year. The mean $U$, as derived from four normalized coefficients, i.e., from mortality in 1977 and 1979 and hospital morbidity in 1977 and 1979, was utilized to select the provinces with the lowest and highest occurrences of the selected groups of diseases. The computations were conducted separately for males and females.

Owing to the normalization, the mortality and hospital morbidity coefficients could be expressed on an identical scale despite their differing means and variabilities. In this connection, when ranking provinces by prevalence of given diseases, both mortality and hospitalization rate had an identical weight.

## Findings

Overall mortality and morbidity. The highest overall mortality and hospital morbidity coefficients were established for both males and females in the Jelenia Gora, Katowice, and Walbrzych provinces (Fig. 1). In these provinces mortality rate exceeded the nationwide level by from 2 to 11 percent depending on age and year. As for hospitalization rate, whose variability was greater by a factor of about 3 than that of the mortality rate, in these provinces it exceeded the nationwide average by about one-third. Making an allowance for the fact that in these provinces the per capita number of hospital beds [as published] exceeds the nationwide average by 10-30 percent, accounts only to a small degree for such a high prevalence of hospitalization rate. An analysis conducted on the basis of coefficients that were additionally standardized with respect to the number of hospital beds yielded findings similar to those presented above.

The lowest mean coefficients were derived for the Warsaw, Gdansk, Krakow, and Siedlce provinces, in which the death rate was 2 to 8 percent below the national average and the hospitalization rate, 12 to 25 percent lower.

In Lomza Province the death rate was explicitly below the national average but the hospitalization rate was higher. A similar trend was recorded in Olsztyn Province, except that there it applied to women alone. A converse situation, that is, a high death rate and a low hospitalization rate, was recorded for Piotrkow Province.

Rheumatic heart disease was the principal cause of deaths and hospitalization in chiefly the northeastern provinces, but there it varied in frequency depending on sex (Fig. 2a). In Piotrkov Province, however, the indicators were high for both males and females. Mortality due to that disease in that province exceeded the nationwide average by more than one-third for males and more than two-thirds for females, and hospital morbidity was two-thirds higher for males and one-third higher for females.

In the Bydgoszcz, Gdansk, and Warsaw provinces rheumatic heart disease rate was lower for both sexes than in the other regions. The corresponding coefficients were one-third to one-fourth lower than for Poland as a whole.

Hypertension rate was relatively most prevalent in the Subcarpathian region (Nowy Sacz and Tarnow provinces as well as — for males — Rzeszow and Pila provinces) (Fig. 2b). Mortality due to that disease in these provinces was about 50-150 percent above the national average, and hospitalization rate, 15-50 percent above. Biala Podlaska Province also may be included in this group in view of the high — about double the national average — rate of deaths for which hypertension was given as the cause. By contrast, the lowest coefficients were recorded, regardless of sex, for the Bydgoszcz, Gdansk, Kalisz, and Siedlce provinces, in which they were one-half the national average.

Ischemic heart disease was most frequent in the Warsaw, Czestochowa, and Kalisz provinces. Among males a high level was also recorded for the Poznan and Katowice provinces, and among females, for the Krakow and Slupsk provinces (Fig. 3a). In these provinces, the mortality coefficients exceeded the national average by 50-100 percent and the hospitalization rate was about one-fourth higher than the national average, except in Warsaw Province, where it was still higher.

The lowest rates of ischemic heart disease occurred in the Biala Podlaska, Ostroleka, and Siedlce provinces, where the coefficients were one-half the national average. This level was also approached in the Lomza and Sieradz provinces as well as — with the exception of the hospitalization rate of females — in Skierniewice Province.

Noteworthy is the situation in Bielsko Province, where the death rate of both males and females was relatively high (in 1979 it was about double the national average) but the hospitalization rate was one-fifth lower than the national average.

Cerebrovascular diseases occurred more often among males and females living in Warsaw and Czestochowa provinces than in other regions (Fig. 3b). There, the death rate exceeded the national average by 50 percent and the hospitalization rate, by 8-47 percent. By contrast, the lowest death and hospitalization rates, lower by nearly one-half than the national average, were recorded for the Koszalin, Pila, Leszno, and Lomza provinces. In Chelm Province the death rate exceeded the national average by 40 to 82 percent, but the hospitalization rate was one-fourth below the national average.

Gastric and duodenal ulcers. In no province was the prevalence of these diseases explicitly greater or smaller than the national average for both males and females, for both the years surveyed (Fig. 4a). An exception is Chelm Province, in which the death rate from these ulcers exceeds the national average by more than one-half (although in 1977 it was close to the national average for males), and the hospitalization rate by about one-third. In addition, Walbrzych Province is among the provinces with the highest prevalence of these diseases among both males and females, chiefly owing to a hospitalization rate that is more than one-half higher than the national average, but its mortality rate due to these diseases is no higher than 10 percent above the national average. In Katowice Province, too, a high hospitalization rate (exceeding the national average by one-third to one-half) was recorded, but the death rate was about 10 percent below the national average. On the other hand, the situation is reversed for the Siedlce and Tarnow provinces, in which the death rate due to these diseases exceeded the national average by 5 to 90 percent but the hospitalization rate was one-fourth below the national average. The only province for which consistently low indicators for both males and females were recorded was Poznan Province. There, the death rate was almost one-half below the national average, and the hospitalization rate, about 20 percent lower.

Cirrhosis of the liver. The geographic pattern of the spread of this disease was stable in time and similar for males and females (Fig. 4b). No major discrepancies between death rate and hospitalization rate were recorded. The highest rates of cirrhosis of the liver were recorded for the Katowice, Warsaw, and Lodz provinces, where the death rate exceeded the national level by 25-91 percent and the hospitalization rate, by 52-89 percent. The provinces in which this disease is the least widespread are located in the southeastern part of the country. There, both mortality and hospital morbidity were one-half below the national average.

## Discussion

Among the causes of the above differences in the frequency of diseases in different regions of the country, problems associated with measuring that frequency are undoubtedly to be distinguished. Death statistics contain only information on the most severe cases of the diseases in question, and the coroner's diagnosis often may be questionable 1. But as for the statistics on

| (1) Rozpoznanie | (2) Zgony | | (3) Leczeni w szpitalach | |
|---|---|---|---|---|
| | (4) Mężczyźni | (5) Kobiety | (4) Mężczyźni | (5) Kobiety |
| (6) Ogółem | 1016<br>(933—1098) | 821<br>(759—864) | 8959<br>(6562—12133) | 10336<br>(7825—14011) |
| (7) Choroba reumatyczna serca | 7<br>(4—15) | 9<br>(5—13) | 66<br>(33—121) | 94<br>(45—155) |
| (8) Nadciśnienie tętnicze | 14<br>(4—33) | 23<br>(5—58) | 136<br>(69—276) | 194<br>(93—394) |
| (9) Niedokrwienna choroba serca | 121<br>(55—214) | 67<br>(20—175) | 423<br>(205—803) | 231<br>(92—420) |
| (10) Choroby naczyń mózgu | 63<br>(27—92) | 74<br>(22—126) | 137<br>(80—234) | 118<br>(45—209) |
| (11) Wrzód żołądka i dwunastnicy | 8<br>(4—13) | 3<br>(1—7) | 308<br>(188—477) | 109<br>(59—191) |
| (12) Marskość wątroby | 16<br>(5—29) | 8<br>(2—15) | 44<br>(12—83) | 22<br>(0—40) |

(13) *) w nawiasach: zakres zmienności współczynników standaryzowanych wg wieku w poszczególnych województwach

Table 1. Mortality and Hospital Morbidity in Poland in 1979 by Diagnosis and Sex. Coefficients per 100,000 capita.

Key: 1. Diagnosis; 2. Deaths; 3. Hospital Patients; 4. Males; 5. Females; 6. Total; 7. Rheumatic heart disease; 8. Hypertension; 9. Ischemic heart disease; 10. Cerebrovascular diseases; 11. Gastric and duodenal ulcers; 12. Cirrhosis of the liver; 13. The figures in the parentheses refer to the variability of the age-standardized coefficients in discrete voivodships.

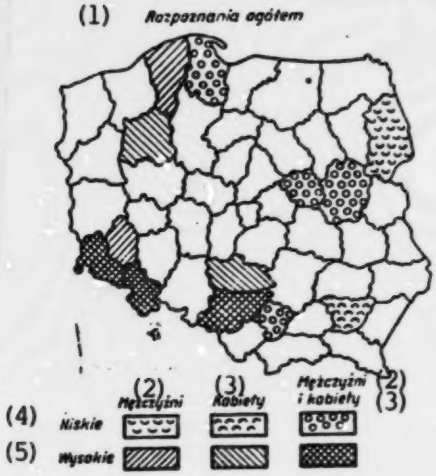
(1) Rozpoznania ogółem
(2) Mężczyźni
(3) Kobiety
Mężczyźni i kobiety (2) (3)
(4) Niskie
(5) Wysokie

Fig.1. Voivodships With Highest and Lowest Prevalence of Overall Morbidity (According to normalized U coefficients)
Key: 1. Overall morbidity;
2. Males; 3. Females; 4. Low; 5. High

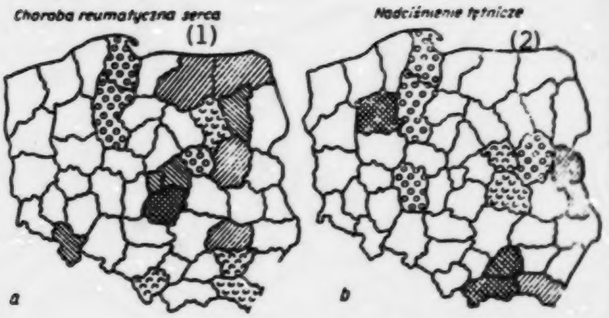
Choroba reumatyczna serca (1)
Nadciśnienie tętnicze (2)
a
b

Fig. 2. Voivodships With Highest and Lowest Prevalence oF Rheumatic Heart Disease (a) and Hypertension (b) (According to normalized U coefficients)
Key: 1. Rheumatic heart disease;
2. Hypertension

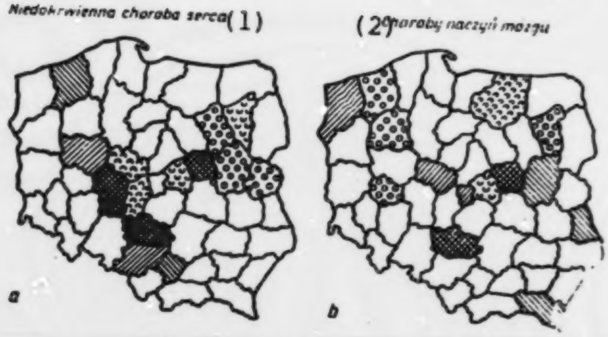
Niedokrwienna choroba serca (1)
(2) Choroby naczyń mózgu
a
b

Fig. 3. Voivodships With Highest and Lowest Prevalence of IsChemiC Heart Disease (a) and Cerebrovascular Diseases (b) (According to normalized U coefficients)
Key: 1. Ischemic heart disease;
2. Cerebrovascular diseases

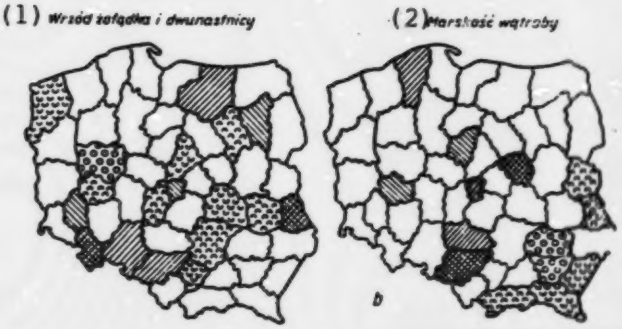
(1) Wrzód żołądka i dwunastnicy
(2) Marskość wątroby
b

Fig. 4. Voivodships With Highest and Lowest Prevalence of Gastric and Duodenal Ulcers (a) and Cirrhosis of Liver (b) (According to normalized U coefficients) Key: 1. Gastric and duodenal ulcers; 2. Cirrhosis of liver

hospitalized patients, they are probably more accurate, and they do include milder cases, but they pertain to selected groups of patients, and the problem is that the selection may differ in different regions, because it may be affected by differences in access to hospitalization and other forms of health care. These factors may influence the rate of readmissions of the same patients to hospitals. But the variability of the percentage of readmissions in discrete provinces is not large (9 to 14 percent of all cases of hospitalization). Hence, this factor does not markedly influence the differences in the geographic pattern of morbidity, although the data presented pertain to recorded cases.

The figures on the hospitalization rate were estimated on the basis of a sample. Thus they are flawed by some random error. For the diseases with less frequent hospitalization rates and for the smaller provinces, the standard deviation of the estimated coefficients for 1979 may have reached one-third. This may have affected the findings of the analyses of statistics on rheumatic heart diseases and cirrhosis of the liver. As for the other, much more frequent groups of diseases analyzed in this study, the error is of the order of 10 percent of the value of the coefficients, while for overall morbidity it does not exceed 2 percent. The fact that this study covers two discrete years markedly reduces the effect of these random errors on the findings.

For both hospitalization rate and mortality the coefficients for 1977 and for 1979 were found to be markedly similar. The correlation coefficients ranged from 0.44 to 0.95, and only for the mortality due to gastric and duodenal ulcers did these coefficients fall to 0.33. This points to some stability in time of the trends analyzed.

The geographic patterns of mortality and hospitalization rate differed markedly for nearly every disease group analyzed. The correlation coefficients ranged from 0.15 for gastric and duodenal ulcers to 0.57 for overall morbidity, and only for cirrhosis of the liver did they reach 0.82. This illustrates the variability of the problems described by each of these indicators. At the same time, consideration of mortality and hospitalization rate enhances the possibility of isolating the provinces in which the prevalence of given groups of diseases is at its highest or lowest. It also makes it possible to identify the provinces in which the gap between death rate and hospitalization rate is relatively large.

Regardless of the flaws in the measurements of disease rates, the recorded differences in the geographic patterns of the coefficients in question undoubtedly reflect the actual differences in morbidity throughout the nation. The factors acccounting for these differences are not easy to pinpoint, and their analysis is the subject of a separate investigation 3.

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1386
CSO: 5400/3023

UNITED KINGDOM

## BRIEFS

RISE IN WHOOPING COUGH--Scotland is facing an epidemic of whooping cough, with almost five times as many cases this year as in the corresponding period of 1985, it was announced yesterday. Mr John MacKay, the Scottish Health Minister, said that the number of cases began to increase last year, and already the number of cases this year at 1,375 was greater than in the whole of 1985. Mr MacKay urged all parents to seek vaccination, which was the only way to reduce the spread of the epidemic, which took place in four-year cycles. He said that any parents with doubts about vaccination should seek advice from their doctor or clinic. [Text] [Edinburgh THE SCOTSMAN in English 10 Jul 86 p 8] /9317

CSO: 5440/108

ZIMBABWE

## LOCAL BERRY MAY ERADICATE BILHARZIA

Gweru MOTO in English No 46 p 12 [no date given]

[Text]

ZIMBABWEAN scientists are studying the feasibility of using a berry, traditionally used as a soap, to eradicate bilharzia, one of the most widespread and debilitating diseases in the Third World.

The disease, also known as schistosomiasis, afflicts 200 million people in 74 developing countries and has the potential to affect another 600 million.

In Zimbabwe it reportedly afflicts over two million people making it the second most important parasitic disease after malaria.

The berry from the Phytolacca Dodecandra plant — locally known as the gopo plant, is known to have molluscicidal properties against schistosomiasis transmitting snails and is reported to be in abundance in Zimbabwe.

According to one of the researchers, Cde Jerry Ndamba, the possibility of using the berry in snail control will be known after next year when researchers based at Blair Research Laboratory in Harare, have completed a three-year research project.

"Although it is difficult to say at the moment when the plant can be used for snail control," Cde Ndamba said, "indications are that by the end of our preliminary studies it would be possible to recommend it for snail control in rural areas."

"Should Phytolocca Dodecandra prove to be a viable molluscicide, it is our intention to actively involve the local community in the cultivation, harvesting and application of the berries, with the village health worker acting in an advisory capacity," he added.

That the berries of the gopo plant are molluscicidal is no longer in question. Rather, what is being looked into is whether it can replace the chemicals presently in use, whether it will be cheaper to use and whether it will be accepted by the community.

The snail killing properties of the berries were first uncovered by Dr Akilu Lemma of Ethiopia's Institute of Pathobiology while studying the distribution and ecology of bilharzia-transmitting snails in the River Assam near the town of Adwa in northern Ethiopia in 1964.

Dr Lemma noticed that in areas next to where people's clothes were, there were many dead snails and small fish floating in the water. Some distance down-stream or immediately up-stream from such washing places, abundant live snails were present.

This led Dr Lemma to the idea that the "soap" which people used for laundering might have molluscicidal properties. Experiments using "Endod", Phytolacca Dodecandra — which people used for washing — proved this.

In Zimbabwe, research work on the use of berries began in 1983. Much extensive work, however, only started last year when a three-year research project was launched.

Studies carried out by Cde Steven Chandiwana, one of the researchers at Blair, showed that two types of Gopo, one from Chitungwiza and the other from Seke, achieved a 100 percent kill rate within 22 hours of exposure at 25 parts per million.

One part per million is one milligramme of berry powder dissolved in a litre of water.

The Seke plant, which was stronger, achieved a 100 percent kill rate within five hours at the same concentration. It was stronger than the Ethiopian type which had an 80 percent kill rate at the same concentration and time.

Further studies by his colleague, Cde Jerry Ndamba, showed that the most potent berries were from the Masvingo area. Berries collected from there proved 100 percent lethal in concentrations of as low as six parts per million.

Studies carried out jointly by researchers from Blair and Steve Mavi of the National Herbarium and Botanic Gardens also in Harare showed that the gopo plant was found in almost every region of Zimbabwe although it is mostly in areas of high altitude and good rainfall.

This makes the plant readily available to the community and therefore cheaper to get. It can even be cultivated where conditions allow that.

Should the experiments being carried out be successful, the advantages of using the gopo plant for the control of bilharzia will be ernomous.

The biggest advantage will be cost. The use of the plant will reduce Zimbabwe's dependence on imported chemicals. It will also serve the country much needed and very scarce foreign currency.

As use of the plant will have to be community based this will in turn lead to improved efficiency of the programme.

"A community based to schistosomiasis control would considerably reduce the cost of the control programme, principally because the plant molluscicide and manpower costs are borne by the community," Cde Chandiwana said.

With the shortage of washing soap, due to lack of foreign currency, people can also take advantage of the availability of the berries.

According to Dr Lemma, clothes washed with the berries are thought to be whiter and normally do not have lice, ticks or mites with them.

The head of the Epidemiology Unit in the Ministry of Health, Dr Richard Munochiveyi said in the United States and in Ethiopia, Endod-containing detergent formulations for washing clothes were being developed. Because of its uniqueness and commercial potential the procedure was being patented in the United States and other countries, he said.

Although studies are still continuing, indications so far show that the plant is safe for humans and animals. This will be an added advantage. ☐

/9274
CSO: 5400/158

VIETNAM

# MEASURES TO PROTECT 10TH MONTH RICE DISCUSSED

Hanoi NHAN DAN in Vietnamese 16 Jun 86 p 2

[Article by Nguyen Quang Tho, M.A., of the Crop Protection Department of the Ministry of Agriculture: "Some Measures To Guard Against and Eliminate Insects and Diseases Harming 10th Month Rice in the Northern Provinces"]

[Text] Among the factors relevant to the situation of insects and diseases harming 10th month rice this year in the northern provinces, in addition to the common feature that the composition of insects and diseases which have arisen in 10th month rice are more varied than those during the fifth month-spring rice season and cause harm from the rice seedling stage to the time when the rice is harvested, something worthy of attention is that the infestation of brown leafhoppers carried over to the 10th month season from the fifth month-spring season is much greater than in any previous year. The CR203 rice variety (accounting for about 50 percent of the total) is resistant to brown leafhoppers, but the other varieties planted on large areas, such as NN 73-10, CN 2, Bao Thai, Moc Tuyen, glutinous rice, etc., are infested with many kinds of insects and diseases to differing degrees. At the same time, there is a severe shortage of agricultural materials compared to the requirements of production. The complicated changes in the weather have a major effect on production, and waterlogging and drought have both directly affected measures for preventing and eliminating insects and diseases. Therefore, from the beginning of the season it is necessary to take the initiative in adopting appropriate, highly effective policies and measures in order to protect the harvests.

With the regard to the principal harmful insects and diseases mentioned above, it is necessary to pay attention first of all to brown leafhoppers, stem borers, army worms, leaf curlers, rice hispa, silver-leaf disease [Xanthomonas oryzae] and rice wilt. The mountain region must pay attention to rice yellows and beetles. Among the various kinds of insects and diseases, some types cause harm from the rice selling stage to the time when the rice is ripe (brown leafhoppers, stem borers, etc.), some types only cause harm during a certain stage of the rice's growth (army worms cause harm when the rice is heading, and rice wilt only causes harm after the rice has tillered), and some types are present only in a certain number of areas (rice yellow only causes harm in the Tay Bac and Viet Bac mountain regions). All those types of insects and insects and diseases, except for army worms, were present in the fifth month-spring rice. After the rice was harvested they remained in the stubble, or immediately moved to the 10th month rice seedling areas and then caused damage to the 10th month rice.

In preventing and eliminating insects and diseases it is necessary to pay attention to all three phases: when rice is still in the seedling stage, when it tillers, and when it heads. On the rice seedling area, attention must be paid to doing a good job of preventing and eliminating the stem borers, leafhoppers, leaf rollers, and rice hispa. When rice is tillering it is necessary to prevent and eliminate the various kinds of leafhoppers, stem borer, leaf rollers, rice hispa, silver leaf disease, and rice wilt. When rice is heading, the most important phase of rice, it is necessary to pay attention to brown leafhoppers, stem borers, army worms, beetles, and rice wilt.

At a time when chemicals and pumps are still in short supply, it is necessary to use many manual methods to effectively eliminate many kinds of insects and diseases. Among the methods of preventing and eliminating insects and diseases on the 10th month rice in the northern provinces, attention must be paid to the following principal points:

After the fifth month-spring rice has been harvested, time must be found to turn over the soil to kill the insects hiding under the roots of the stubble, such as stem borers, leafhoppers, rice hispa, and rice gall flies. If the paddies lack water and cannot be plowed in time, the stubble should be cut close to the roots and weeds should be cut around the paddy borders in order to kill the various kinds of leaf curlers, leafhoppers, etc.

The soil of rice seedling beds must be carefully prepared and the borders must be kept weed-free in order to reduce the sources of insects and diseases. Rice seedling beds should be concentrated to facilitate management and prevent and eliminate insects and diseases. Rice seedlings should be sown at the specified times. When the seedlings have at least three leaves the situation of insects and diseases on the seedlings must be continuously monitored and such manual methods as using nets to catch stem borer moths, leaf curlers, and rice hispa, the plucking of stem borer egg nests, etc., should be employed. With regard to some kind of insects, it is possible to combine the use of insecticides, but they must be used economically and with the correct techniques. Rice seedlings which are uprooted for transplanting must be free of insects and diseases, and seed seedlings from which buds have broken off, which are bent, etc., must be eliminated.

Rice must be transplanted on schedule, and it is necessary to do a good job of organizing the continuous monitoring of changes in insects and diseases affecting 10th month rice and take the initiative in combining the elimination measures, while adjusting the water level in order to limit rice wilt, weed, rake mud, and spread fertilizer to eliminate rice yellows, and spread poison to kill army worms. Usually, when the rice has finished heading the various kinds of insects and diseases easily cause harm over a large area and causes rice yields to decline greatly, especially beetles, brown leafhoppers, and army worms. Many places have experience in such elimination measures as separating the rice into small areas in order to kill leafhoppers in flooded paddies, and using poison or fire to kill beetles and catch army worms. Only when necessary should chemicals be used. They should be used to ensure the through elimination of insects and the situation of many repeated spraying should be avoided. In that phase, if the rice is harmed by insects and diseases for an additional day the yield declines greatly.

In addition to the coordination and application of all the measures mentioned above, the cooperatives must organize specialized units, prepare sufficient pumps and chemicals in advance, and have plans to promptly eliminate the insects and diseases to prevent them from spreading, limit the damage to the lowest level, and ensure uniform 10th month rice yields and output in all plantings and on all fields.

5616
CSO: 5400/4390

# COUNTRY WARNED OF RICE CROP INSECT OUTBREAK

BK041150 Hanoi Domestic Service in Vietnamese 0500 GMT 31 Jul 86

[Text] The Vegetation Protection Department recently issued a notice saying that summer-fall and 10th-month rice in all provinces throughout the country is being ravaged by two-dot stemborers, brown planthoppers, white leafhoppers, rice caseworms, rice armyworms, ground beetles, rice blast, and yellow dwarf; especially two-dot stemborers, brown planthoppers, white leafhoppers, rice caseworms, and rice armyworms.

In the northern province, two-dot stemborer larvae continue ravaging early summer-fall rice with an average density of 1-2 larvae per square meter. In highly infested areas the density of those larvae is 15-20 per square meter.

In the Mekong River delta provinces, as many as 20,000 hectares of riceplants that are in the blossoming stage have been affected by two-dot stemborers. Of these, more than 4,000 hectares have been subject to serious damage.

It is forecast that two-dot stemborers will begin to metamorphose into flies in abundance in mid-August and that these flies will cause silver blossoms to summer-fall and 10th-month riceplants in the northern provinces. Meanwhile brown planthoppers and white leafhoppers will continue to revage the main 10th-month rice crop. In the southern provinces, rice caseworms and stemborers will continue to develop and ravage summer-fall rice and 10th-month rice.

To limit the losses caused to rice by insects and blight in the days ahead, the Vegetation Protection Department requests that all localities in the north keep a close watch for the appearance of two-dot stemborer flies of the fourth litter; trim wilted branches and destroy nests containing insect eggs; and keep abreast of the development of brown planthoppers, rice caseworms, and rice hospa over the areas of early 10th-month rice so that countermeasures can be adopted promptly.

Meanwhile, the southern provinces should continue detecting and destroying the nests of brown planthoppers and white leafhoppers along with eradicating stemborers, rice caseworms, and ground beetles.

/9738
CSO: 5400/4402

## BRIEFS

MEKONG DELTA PEST CONTROL--The summer-fall rice crop is developing fairly well, but harmful insects and diseases have affected more than 100,000 hectares. Along with urgently harvesting the early rice crop, various localities are concentrating all resources, means, and manpower on tending to and protecting the summer-fall rice from drought, harmful insects, and diseases. An Giang, Cuu Long, and Dong Thap provinces have provided production collectives with more than 6,000 additional metric tons of nitrate fertilizer and 170,000 bottles of pesticide to promote the growth of summer-fall rice plants and to protect them from harmful insects and diseases. Meanwhile, Long An, Ben Tre, Hau Giang, and Cuu Long provinces have mobilized 3,700 additional diesel pumps to irrigate ricefields. Due to their active inspection work, prompt detection of harmful insects and diseases, and expeditious sending of pesticide to key areas within 1 week Tien Giang and Ben Tre provinces managed to save nearly 10,000 of the 12,000 hectares of summer-fall rice hit by harmful insects and diseases. [Text] [Hanoi Domestic Service in Vietnamese 2300 GMT 28 Jul 86 BK] /9738

CSO: 5400/4402

END